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1989

Wisconsin Department of Industry, Labor and Human Relations
Division of Employment and Training Policy

Labor Market Information Bureau

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LABOR MARKET LMI INFORMATION

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Committee Members:

Augie Cibarich
Joe Tumpach
Jerry Snow
Sandi Scrivner
Jared Bessert
Maile Pa'alani
Janet Pugh
Mike Schoenfield
Nicki Van Etten

Principal Editors:

Jerry Snow
Sandi Scrivner

Desk Top Publishing Editors:

Jared Bessert
Nicki Van Etten

Labor Market Information Bureau Contacts

SUBJECT	CONTACT	TELEPHONE
Affirmative Action Data	Joe Tumpach	(608) 266-0851
Consumer Price Index Information	Ken Siemers	(608) 266-3267
Covered Employment and Wages (CEW)	Linda Schultz	(608) 267-3513
Current Employment Statistics (CES)	John Henning	(608) 266-8341
Economic Information	August Cibarich	(608) 266-0522
Local Area Unemployment Statistics (LAUS)	Freida Schroeder	(608) 266-5321
Occupational Employment Statistics (OES)	Tim Marquis	(608) 267-9609
Permanent Mass Layoff & Plant Closing (PMLPC)	Kay Sommers	(608) 267-9611
Projections, Industrial & Occupational	Tom Rondou	(608) 266-0689
Wage Survey	Bill Beutel	(608) 266-2999
Wisconsin Occupational Information Coordinating Council	Maile Pa'alani	(608) 266-8012
Employment and Training Library	Janet Pugh	(608) 266-2832
General Information for the Bureau		(608) 267-9613

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Preface

The 1989 *Planning Information for Employment, Training and Industrial Development* (PIETID) is a biennial publication with data updates scheduled for alternate years.

The publication's purpose is to provide individuals select Wisconsin labor market information. With this information readers can choose from the variety of useful statistics that best meet their needs. The reader's own interpretation of the data should facilitate employment, training or economic development decision-making and planning.

The labor market topics include historical perspectives of industry's employment levels, population and labor force trends, education, job service files, and data about people needing employment and training. Additionally income sources, and occupations projected in the year 2000 are included.

In most cases, statistical data compare the most recent data available at time of publication to statistical data covering the past ten years. Sources are included for each profile topic. To aid in the understanding of technical terminology a list of acronyms and a glossary of terms are included.

Readers, please write to us with your comments on what you liked about this publication, what you did not like and what topics you would have us add in the next publication. Reader responses help to keep this document an effective resource publication.

Introduction

Labor market information is about interactions between the labor force and the work place. The labor force is affected by social trends, economic trends, demographic changes, labor force participation rates, training, work experiences and skills. The work place is influenced by economic activity, technology, competition, organizational structure and investments. In many ways compiling labor market information is like putting together a jigsaw puzzle. There are many pieces, each with its own shape, pattern, and color. Separately they may be interesting, but together they create a whole picture.

The purpose of the 1989 *Planning Information for Employment, Training and Industrial Development* (PIETID) is to provide individuals with selected pieces of Wisconsin labor market information. The topics are frequently requested pieces of a larger puzzle. Each chapter contains profiles of an aspect of the labor force. Most chapters contain historical statistical information. The most recent data are for either 1987 or 1988. The intended use of the data is for short range planning and analysis.

The publication contains eight chapters. Chapter 1 briefly reviews factors that affect employment and unemployment levels, and nonfarm wage and salary employment levels, then provides two sets of forecasts for 1990 and 1991. Chapters 2 and 3 use combinations of population and labor force totals, percentage changes, historical data, age and gender cohorts to present trends and projections about Wisconsin's population and labor force changes.

Industry employment levels in Chapter 4 are presented seven different ways. Employment levels are grouped according to number of employes per employer and by industry classification, with statistical data highlighting growth, decline or historical employment trends.

Chapter 5 profiles the occupations of demand, decline or growth to the year 2000. New job creations and labor force replacement needs point to the total expected openings in projected occupations.

Chapter 6 provides three views of earnings: per capita personal income, wages by occupational classification, and wages by industry classification.

In Chapter 7 there are data, both historical and current, on secondary and post-secondary education attainment levels. Data on degrees conferred from Chapter 7 and occupations declining or growing from Chapter 5 provide a planner with general information about the types of experience and skills of the labor force over against the trends of occupational needs.

Chapter 8 completes the report with statistical data from two programs, Job Training Partnership Act (JTPA) and Job Service.

The audience for the PIETID is large and diverse; each reader selects those data pieces to create a customized puzzle picture. Employers set wages and working conditions and evaluate alternative business opportunities. Counselors and students identify occupational outlooks before selecting a program of study. Job seekers evaluate employment opportunities. Educators and trainers identify skill needs, develop new curricula, and implement training programs. Job developers identify possible job openings. Policy makers evaluate the success of employment and training programs and economic development efforts. These different readers use the same information, but with different perspectives and needs. The 1989 PIETID has been designed to provide pieces of the labor market information picture in Wisconsin.

How to get the most out of the PIETID

The 1989 Wisconsin *Planning Information for Employment, Training and Industrial Development* is significantly different from previous editions. There are more statistics and less detailed analysis. There is a broad range of labor market topics.

In most chapters the data are presented as 'profiles'. Most profiles are one page long and contain:

Data: Historical and current statistics on a specific topic.

A graph: A visual representation showing a relationship between the data.

Brief analysis: Observations, in a bullet format, about some interesting or important aspect of the data.

Each profile is numbered, for example 2.3. The numbering indicates the chapter and the number of the profile within the chapter. All profiles are listed, with their number, in the Table of Contents.

The data, graphics and observations in each profile deal with a limited topic. Each one can be used to answer a particular question. More detailed analysis might be able to point out relationships between the various topics; that type of analysis is left to the user who addresses the topic with a particular need.

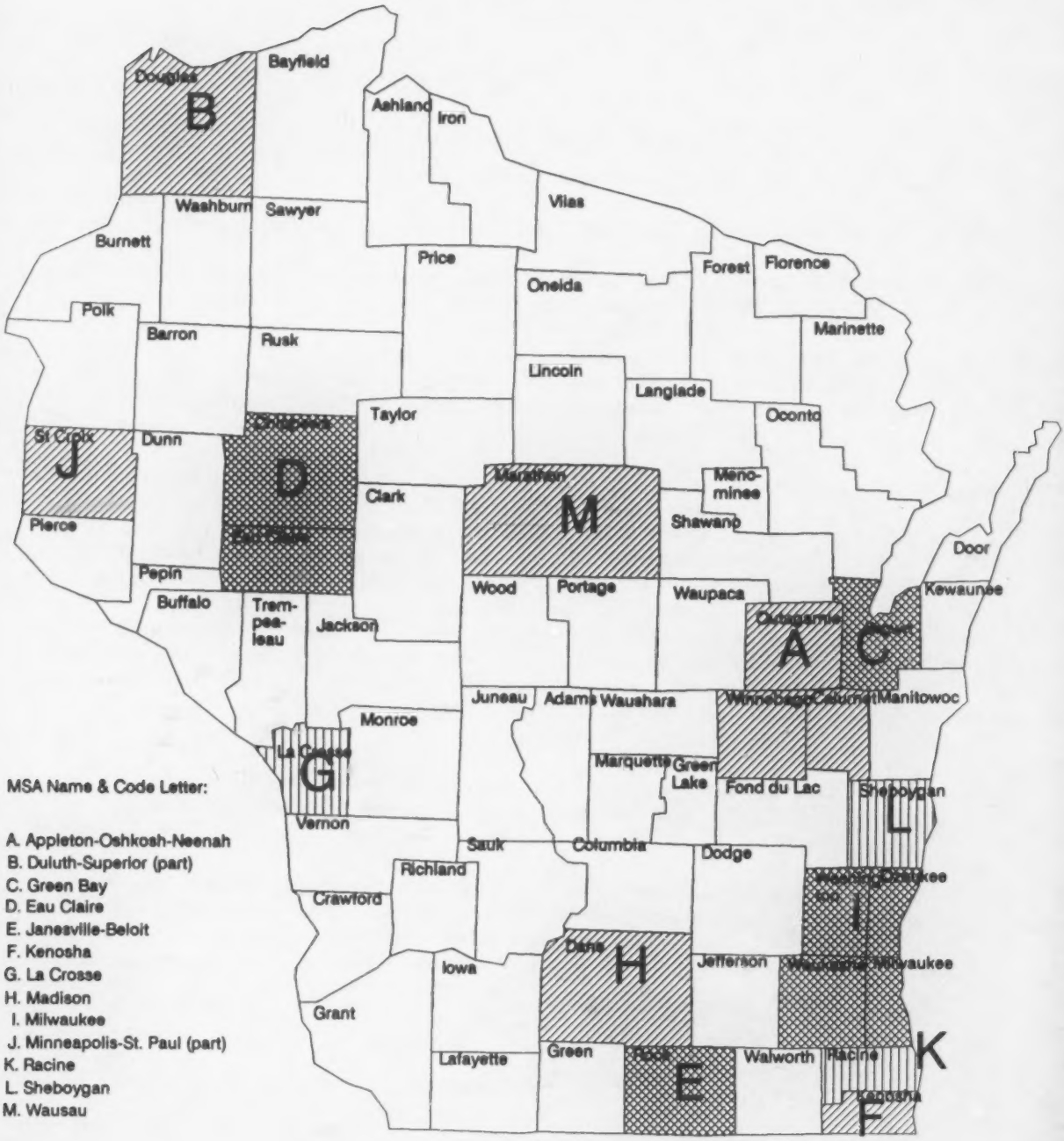
Some users may wish more detailed data. Each table includes a citation for the source of the data. A table of Detailed Industrial Employment Information at the Two and Three Digit Levels is located in Appendix B, p.71. Appendix D lists LMI publications which may contain more detailed information. These reports can be ordered using the Order Form on page 85. Labor market analysts in the Labor Market Information Bureau and the Employment and Training Library may also be consulted for additional data, see p.ii.

Some users may need more localized data. In addition to this statewide PIETID there are 17 individual Service Delivery Area (SDA) publications. Maps on pages viii and ix show the boundaries of the Metropolitan Statistical Areas and the boundaries of the SDA's in Wisconsin. In each SDA there is a labor market analyst who can provide data for that area. A list of the analysts is on page x.

Every discipline has its own, specialized language. A list of commonly used Acronyms is on p.xii. A Glossary, defining the words of the labor market information vocabulary, is in Appendix A, p.68.

EVALUATION FORM: The PIETID has its roots in many years of publications designed for use by planners and others. Because this year's is different from previous reports, it is important that the Labor Market Information Bureau hear from users about the usefulness of both the content and format of the PIETID. An Evaluation Form is in Appendix C, p.84. Please take a few moments to fill out the evaluation and return it to the Bureau.

Metropolitan Statistical Areas

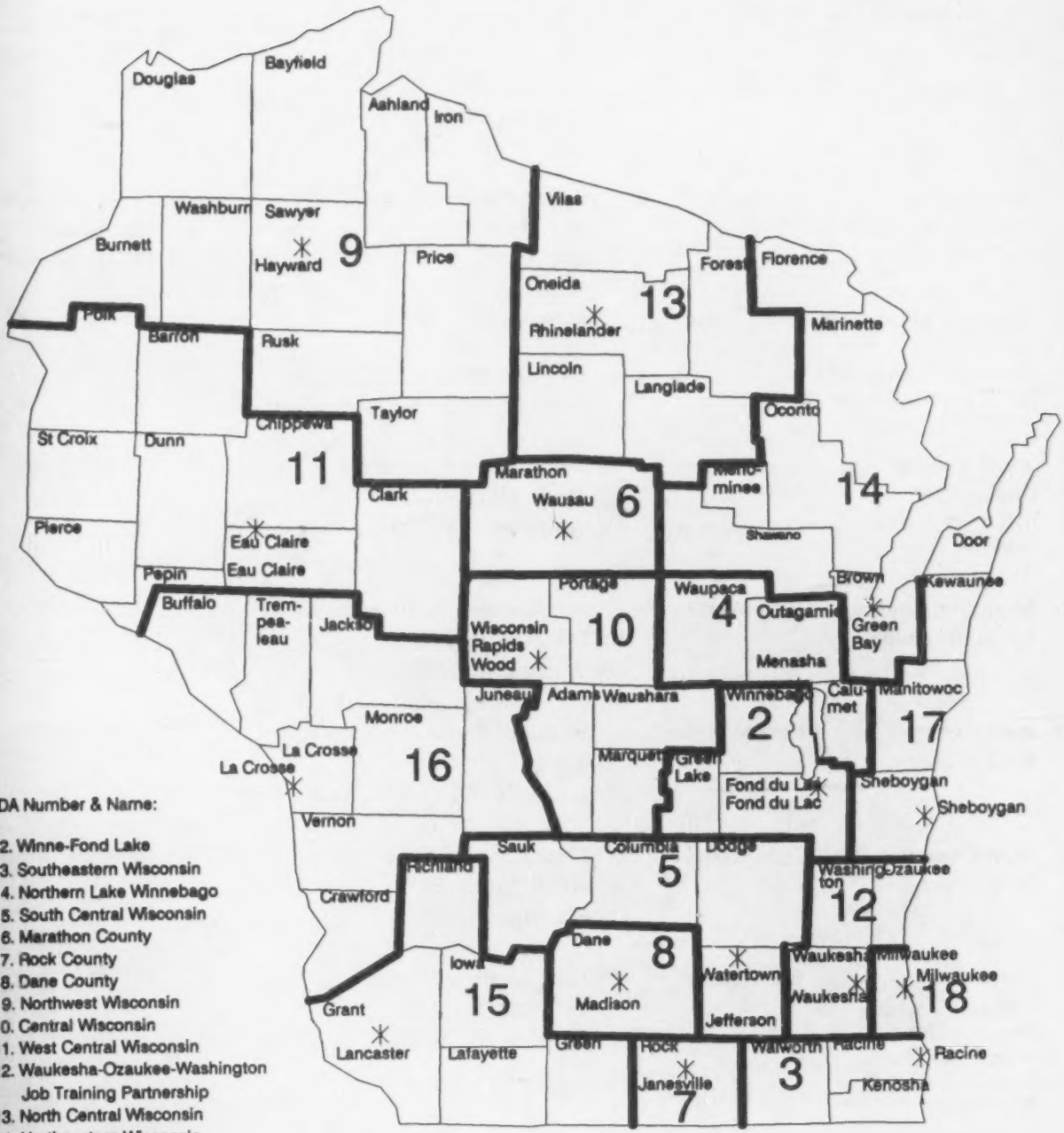


MSA Name & Code Letter:

A. Appleton-Oshkosh-Neenah
B. Duluth-Superior (part)
C. Green Bay
D. Eau Claire
E. Janesville-Beloit
F. Kenosha
G. La Crosse
H. Madison
I. Milwaukee
J. Minneapolis-St. Paul (part)
K. Racine
L. Sheboygan
M. Wausau

jdp:9/88

Service Delivery Areas



SDA Number & Name:

2. Winne-Fond Lake
3. Southeastern Wisconsin
4. Northern Lake Winnebago
5. South Central Wisconsin
6. Marathon County
7. Rock County
8. Dane County
9. Northwest Wisconsin
10. Central Wisconsin
11. West Central Wisconsin
12. Waukesha-Ozaukee-Washington Job Training Partnership
13. North Central Wisconsin
14. Northeastern Wisconsin
15. Southwestern Wisconsin
16. Western Wisconsin
17. Lake Michigan
18. Milwaukee County

✳ Location of Job Service LMI Analysts

Local Labor Market Analysts

Service Delivery Area	Analyst *	Address	Telephone
2 **Winne-Fond Lake** Fond du Lac, Green Lake & Winnebago counties	Dan Curtin	Oshkosh Job Service P.O. Box 298 Oshkosh, WI 54902	(414) 424-3029
3 **Southeastern** Kenosha, Racine & Walworth counties	Marge Smith	Lakeshore Job Service 411 7th St. Racine, WI 53403	(414) 636-3640 Kenosha No.: (414) 656-7047
4 **Northern Lake Winnebago** Calumet, Outagamie & Waupaca counties	Dan Curtin	Oshkosh Job Service P.O. Box 298 Oshkosh, WI 54902	(414)424-3029
5 **South Central** Columbia, Dodge Jefferson & Sauk counties	Karl Broehm	Watertown Job Service 314 E. Main Street Watertown, WI 53094	(414) 262-6990
6 **Marathon County** Marathon county	Gary Werner	North Wisconsin River Valley Job Service 714 1st Street Wausau, WI 54401	(715) 842-0840
7 **Rock County** Rock county	Claude Miller	Rock/Southwest Job Service 211 N. Parker Drive Janesville, WI 53545	(608) 755-2091
8 **Dane County** Dane county	Judy Powell Miller	Dane County Job Service 206 N. Broom St. Madison, WI 53703	(608) 266-3391
9 **Northwest** Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor & Washburn counties	Bev Gehrke	Lake Superior Job Service 111 Main Hayward, WI 54843	(715) 634-4845
10 **Central** Adams, Marquette, Portage, Washara & Wood counties	Joe Colletti	Central Wisconsin Job Service 2821 8th St. South Wisconsin Rapids, WI 54494	(715) 422-5013

Local Labor Market Analysts

Service Delivery Area	Analyst *	Address	Telephone
11 **West Central** Barron, Chippewa, Clark, Dunn, Eau Claire, Pepin, Pierce, Polk & St. Croix counties	Paul Tabor	Eau Claire Job Service 418 Wisconsin St. Eau Claire, WI 54702	(715) 836-4101
12 **W-O-W** Ozaukee, Washington &, Waukesha counties	Terry Ludeman	Waukesha Job Service 141 NW Barstow Waukesha, WI 53186	(414) 521-5048
13 **North Central** Forest, Langlade, Lincoln, Oneida & Vilas counties	Dan Augustine	North Wisconsin River Valley Job Service 130 S. Stevens Rhinelander, WI 54501	(715) 369-5500
14 **Northeastern** Brown, Florence, Marinette, Menominee, Oconto, & Shawano counties	Jim Lemke	Green Bay Job Service 330 S. Jefferson St. Green Bay, WI 54301	(414) 436-4069
15 **Southwestern** Grant, Green, Iowa, Lafayette, & Richland counties	Lola Sweeney	Lancaster Job Center 925 North Madison Lancaster, WI 53813	(608) 723-2153
16 **Western** Buffalo, Crawford, Jackson, Juneau, La Crosse, Monroe, Trempealeau, & Vernon counties	Paul Schwartz	La Crosse Job Service 508 5th Ave. S. La Crosse, WI 54601	(608) 785-9307
17 **Lake Michigan** Door, Kewaunee, Manitowoc &, Sheboygan counties	Dick Seidemann	Lake Michigan Job Service 934 Michigan Ave. Sheboygan, WI 53081	(414) 459-3846
18 **Milwaukee County** Milwaukee county	Ron Ramlow	Milwaukee Downtown Job Service 819 N. 6th Street Milwaukee, WI 53203	(414) 227-4310

* Analysts may change, but the telephone numbers should find someone who can provide information.

Acronyms

AFDC	Aid to Families With Dependent Children Program
BLS	United States Bureau of Labor Statistics
DILHR	Department of Industry, Labor and Human Relations (Wisconsin)
CEW	Covered Employment and Wages (formerly ES 202 Unemployment Compensation Data Series)
JS	Job Service
JTPA	Job Training Partnership Act
LMI	Labor Market Information
MSA	Metropolitan Statistical Area
PIETID	*Planning Information for Employment, Training and Industrial Development* publication
PY	Program Year
SDA	Service Delivery Area
SIC	Standard Industrial Classification
SOC	Standard Occupational Classification
Title II A&B	Economically Disadvantaged Program
Title III	Dislocated Worker Program
UC	Unemployment Compensation

1 Wisconsin Economic Outlook

Profiles –

1.1 Projections for 1989
Based on Slower Economic Growth

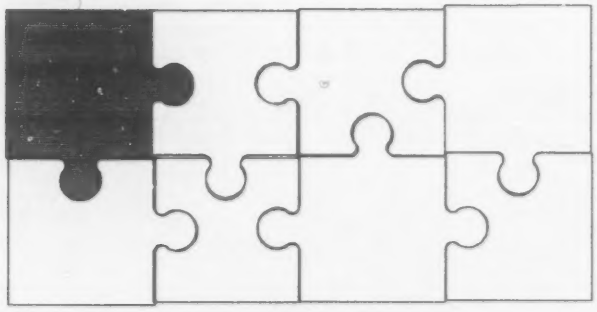
1.2 Projections for 1990 and 1991
Based on Slower Economic Growth

1.3 Projections for 1990 and 1991
Based on a Mild Economic Downturn

1.4 Nonfarm Wage and Salary
Employment Projections for 1989

1.5 Projections of Nonfarm Wage & Salary Employment for 1990 and 1991 Based on Slower Economic Growth

1.6 Projections of Nonfarm Wage & Salary Employment for 1990 and 1991 Based on a Mild Downturn



Wisconsin Economic Outlook

The nation's economy has been expanding for over six years. This expansion raised employment levels and, until very recently, lowered unemployment rates. Expansions do not last forever. Will this expansion continue through 1989? Most economists continue to forecast slow, unspectacular growth through 1989.

The economy has only slight forward movement in mid-1989, and within the forecast period it would take a strong force to boost its growth. Since World War II, business expansions have often been stopped by deliberate action of the Federal Reserve Board to reduce inflationary pressures by cooling the economy. An increased rate of inflation caused the Federal Reserve Board to move to monetary tightening in 1988. That tightening has slowed the national economy's rate of growth in 1989. Recently the Federal Reserve Board has relaxed monetary policy slightly.

Events other than severe inflation could retrigger monetary tightening. Severe imbalances exist in the nation's financial system. Failure of one or more of the components of the financial system could result in new monetary tightening. The financial system's safety net may not be able to continue to handle all the imbalances in our economy. Economic shocks resulting in systematic failure in the financial system rather than inflation appear to be the major risk to continued growth of the economy in 1990 and 1991.

Wisconsin Labor Force Changes in 1989

The year 1989 is likely to see a continuation of the growth in the labor force and employment experienced in 1988, but at a much slower rate. The unemployment level and the unemployment rate have been below-year-earlier levels in the first half of 1989. Improvements over low-year-earlier monthly levels and rates are not likely in the second half of the year.

Growth in total employment in 1989 can be expected to slow considerably from the 1988 rate. The 1988 growth in total employment is best described as a special phenomenon because the large difference between total employment growth and nonfarm wage and salary employment growth since 1979 was eliminated by the total large employment increase in 1988.

The average employment level is expected to increase somewhat in 1989 and the average unemployment level in 1989 is expected to remain close to the 1988 level or increase moderately. Thus, the improvement in these two measures of state economic activity is expected to be much less than that of the previous two years.

Profile 1.1
Projected Change for 1989 Based on the Assumption of Continued Economic Growth but at Slower Rates
(Numbers in Thousands)

	Actual		Projected	Numeric Change		Percentage Change	
	1987	1988	1989	1987-88	1988-89	1987-88	1988-89
Labor Force	2,494	2,575	2,625	81	50	3.2%	1.9%
Unemployment Level	152	110	118	-42	8	-27.6%	7.2%
Total Employment	2,342	2,465	2,507	123	42	5.3%	1.8%
Unemployment Rate	6.1%	4.3%	4.5%	-1.8*	0.2*	-	-

* Percentage Points

Source: DILHR, Labor Market Information Bureau, Current Population Survey

Recent 1989 Labor Force Growth Implications

Considering Wisconsin's labor force changes for 1989, below are two forecasts for the calendar years 1990 and 1991.

Primary forecast: continued economic growth but at slower growth rates for 1990 and 1991 (see Profile 1.2).

Job opportunities cannot continue to pull large numbers of additional jobseekers into the labor market in 1989, as participation rates are already over 70 percent in Wisconsin. In addition, if many economic forecasts of slow growth are correct, 1989 should see moderation in the labor force growth in the nation and Wisconsin, and possibly a topping out of the business recovery.

This slower rate of employment gain is expected to continue in the foreseeable future. Only a substantial rise in net inmigration will overcome the limits the natural net gain (births minus deaths) in the adult working-age population is exercising on employment growth. A large natural net gain is not expected by demographic experts.

An increase in net inmigration gain is likely to occur in 1989 as it did in 1988. The gain is likely to be only a marginal improvement that is not capable of providing an increase in the adult working-age population large enough to continue the level of employment gains experienced in 1987 and 1988.

Continued slow economic growth nationally in 1990 and 1991 should produce increases in Wisconsin's total employment growth of moderate proportions. An estimate of 18,000 additional employed persons in 1990 and 12,000 more in 1991 can be expected. Slowing labor force growth should limit the unemployment increase to about 7,000 in 1990 and 3,000 in 1991. This increase would in turn increase the unemployment rate by only two-tenths of a percentage point in 1990 and one-tenth in 1991.

Alternative forecast: mild economic downturn for 1990 and 1991 (see Profile 1.3).

The torrid pace of labor force growth over the past two years that resulted in an annual average increase of 172,000--was a surprise. A slowdown in labor force growth is expected in 1989 following 1987's and 1988's surprising growth.

For one thing, in recent months the participation rate of the Wisconsin adult working-age population has been estimated at over 70 percent. As a result, additional increases in the participation rate will be difficult to achieve, if achievement is at all possible. This will limit future labor force growth.

Unemployment levels and rates will also be limited by the slow population growth. The unemployment rates, from a given amount of economic activity, will be lower in the future than when peak numbers of "baby boomers" were entering the labor force. Unemployment rates will be similar to those rates which occurred in the 1950's and 1960's when growth in the adult working-age population was smaller.

In the event that a mild economic downturn occurs sometime in 1990, we can expect more unemployed and fewer employed persons and slightly less growth

Profile 1.2
Projected Change for 1990 and 1991
Based on the Assumption of Continued Economic Growth but at Slower Rates
(Numbers in Thousands)

	Projected			Numeric Change		Percentage Change	
	1989	1990	1991	1989-90	1990-91	1989-90	1990-91
Labor Force	2,625	2,650	2,665	25	15	1%	0.6%
Unemployment Level	118	125	128	7	3	5.9%	2.3%
Total Employment	2,507	2,525	2,537	18	12	0.8%	0.5%
Unemployment Rate	4.5%	4.7%	4.8%	0.2*	0.1*	-	-

* Percentage Points

Source: DILHR, Labor Market Information Bureau, Current Population Survey

in the labor force. Unemployment can be expected to increase by about 27,000 while employment declines by 12,000 for a labor force gain of 15,000. The unemployment rate would be one percentage point higher in 1990 than in 1989.

Changes in 1991 can then be expected to be minor, with unemployment 5,000 higher and employment 5,000 lower. The labor force level would remain about unchanged and the unemployment level would be two-tenths of a percentage point lower as the number of discouraged persons not in the labor force tends to increase after the onset of a recession.

Expected 1989 Nonfarm Wage and Salary Employment Level Changes Mid-1989 Forecast (see Profile 1.4)

Nonfarm wage and salary employment has been increasing during the current expansion of the economy. Since the low point of the early 1980's, it has increased by 325,000 and is now at a record level. Increases in the most recent two years have averaged over 60,000 each year as the expansion has progressed.

Growth in 1989 is likely to be below the high rate experienced in the last two years. A gain of about 50,000 is likely in 1989. As has been the case in recent years, most of the increase is expected to be concentrated in the service-producing sector, with only about one-fourth of the gain in the goods-producing sector.

Employment Outlook by Industry Groups

The mining and construction industries, which are interrelated in Wisconsin, should gain only a little in 1989 as construction of office and commercial buildings, and housing is expected to slow. Small increases in employment are expected to occur.

Construction industry employment levels have benefited from moderate interest rates and additional revenue from gas taxes and should not change much from 1988 levels in 1989 unless interest rates resume their increase this year. The small mining industry should change employment marginally as it responds to moderation in the state's construction activity.

Manufacturing industry employment has been rebounding significantly over the last two years, regaining more of the employment lost in the early 1980's. Over the last two years, manufacturing has grown by 30,000. A gain of about 7,000 now seems likely in 1989. This will bring manufacturing back to about its 1980 level. The gain is expected to be concentrated in the durable portion of manufacturing. As a group, employment in the durable industries should increase about twice as much as the nondurable group during 1989.

Employment gains are expected to be modest in 1989 in the transportation, communication and public utilities group as the public utilities and communications portions are showing small declines from year-ago levels. Motor freight should remain slightly above year-ago levels.

Profile 1.3
Projected Change for 1990 and 1991
Based on the Assumption of a Mild Economic Downturn
(Numbers in Thousands)

	Projected			Numeric Change		Percentage Change	
	1989	1990	1991	1989-90	1990-91	1989-90	1990-91
Labor Force	2,625	2,640	2,640	15	0	-0.6%	0%
Unemployment Level	118	145	140	27	-5	22.9%	-3.4%
Total Employment	2,507	2,495	2,500	-12	5	-0.5%	0.2%
Unemployment Rate	4.5%	5.5%	5.3%	1*	-0.2*	-	-

* Percentage Points

Source: DILHR, Labor Market Information Bureau, Current Population Survey

Trade employment is continuing its growth pattern of recent years. Most of the growth has occurred in the large retail portion, and 1989 is expected to be no exception. The rate of growth is faster in the wholesale portion.

Within retail trade, growth is expected to continue to be broadly based with eating and drinking and specialty merchandising firms expected to show the largest increases in employment, if they can recruit and keep the workers. Food stores and the miscellaneous retailing group (including catalog merchandisers) are also expected to continue to have significant growth. Automobile dealers and automobile service stations are expected to grow more slowly or decline slightly. Department stores are expected to maintain current employment levels or grow only slightly.

Finance, insurance and real estate firms as a group should continue adding workers but at a little less rapid rate. The insurance grouping, which has accounted for half of the industry's growth over the last year, should add the most during 1989. Real estate and banking firms should add a few workers to the current employment level but are not expected to increase employment much over current levels.

Service industry firms are expected to continue the recent extensive growth, with employment increasing at a pace almost equal to that of recent years, unless labor scarcity reduces growth. Medical and health services, the largest service grouping, is expected to increase employment significantly despite shortages of trained workers. The hospital portion of this grouping should continue to increase employment levels, although most of the health industry gain is expected to continue to occur in nonhospital health care settings, especially nursing homes. Business services will have a stable employment level or only slight growth as the personnel services portion is employing less. Private social service organizations are expected to continue to add workers. Employment growth in personal care services could be

Profile 1.4
Wisconsin Nonfarm Wage and Salary Employment Projections for 1989
(Average Annual Employment in Thousands)

Industry	Actual		Projected	1988-89 Change	
	1987	1988	1989	Number	Percent
Nonfarm Wage and Salary	2,089.6	2,149.0	2,200.0	51.0	2.3
Goods-Producing:					
Mining	2.0	2.2	2.5	0.3	13.6
Construction	72.2	71.5	73.5	2.0	2.7
Manufacturing	528.7	550.6	558.0	7.4	1.3
Durable Goods	321.3	338.0	343.0	5.0	1.5
Nondurable Goods	207.4	212.6	215.0	2.4	1.1
Serivce-Producing:					
Transportation and Public Utilities	95.0	97.4	100.0	2.6	2.6
Trade	494.3	505.9	519.0	13.1	2.5
Wholesale Trade	105.5	108.7	110.0	1.3	1.2
Retail Trade	388.8	397.2	409.0	11.8	2.9
Finance, Insurance and Real Estate	112.6	115.4	118.0	2.6	2.2
Services	459.8	479.9	495.0	15.1	3.1
Government	325.0	326.2	334.0	7.8	2.3
Federal Government	28.8	29.2	30.0	0.8	2.7
State Governnent	82.9	82.6	85.0	2.4	2.8
Local Government	213.2	214.5	219.0	4.5	2.1

* Numbers may not add due to rounding

Source: DILHR, Labor Market Information Bureau, based upon Current Employment Statistics data

limited by labor scarcity. The miscellaneous services group (professional specialties) should also increase employment by significant amounts. Private social service organizations are also expected to continue adding workers.

Other service industry groups such as agricultural services, hotels and rooming houses and membership organizations are all expected to add a small number of workers. Amusement and recreation firms should increase employment levels as dog racing tracks and other gambling expands. Employment in private education may decline slightly during 1989. Overall, the service industry group should continue to increase at one of the most rapid rates of any industry, but not quite as rapidly as it has in prior years.

The government employment level average as a group will increase during 1989. Federal, state and local government levels all should edge up.

Thus, while employment changes in 1989 are expected to be generally similar to 1988 with service industry groups' employment levels generally gaining and goods production industry groups edging upward or remaining stable, the gains will be smaller in 1989 than in 1988.

Profile 1.5
Projected Forecast for Wisconsin Nonfarm Wage and Salary Employment
1990 and 1991 Continued Economic Growth but at Slower Rates
(Average Annual Employment in Thousands)

Industry	Projected			Numeric Change		Percentage Change	
	1989	1990	1991	1989-90	1990-91	1989-90	1990-91
Nonfarm Wage and Salary	2,200.0	2,225.0	2,240.0	25.0	15.0	1.1	0.7
Goods-Producing:							
Mining	2.5	2.0	2.0	-0.5	0	-20.0	0
Construction	73.5	73.0	71.0	-0.5	-2.0	-0.7	-2.7
Manufacturing	558.0	563.0	565.0	5.0	2.0	0.9	0.4
Durable Goods	343.0	345.0	345.0	2.0	0	0.6	0
Nondurable Goods	215.0	218.0	220.0	3.0	2.0	1.4	0.9
Service-Producing:							
Transportation and Public Utilities	100.0	100.0	100.0	0	0	0	0
Trade	519.0	527.0	530.0	8.0	3.0	1.5	0.6
Wholesale Trade	110.0	112.0	113.0	2.0	1.0	1.8	0.9
Retail Trade	409.0	415.0	417.0	6.0	2.0	1.5	0.5
Finance, Insurance and Real Estate	118.0	120.0	122.0	2.0	2.0	1.7	1.7
Services	495.0	502.0	510.0	7.0	8.0	1.6	1.6
Government	334.0	338.0	340.0	4.0	2.0	1.2	0.6
Federal Government	30.0	30.0	30.0	0	0	0	0
State Government	85.0	86.0	86.0	1.0	0	1.2	0
Local Government	219.0	222.0	224.0	3.0	2.0	1.4	0.9

Source: DILHR, Labor Market Information Bureau, based upon Current Employment Statistics data

Employment Levels in 1990 and 1991

Presented below are two forecasts for nonfarm wage and salary employment levels for calendar year 1990 and 1991. The first forecast assumes continued growth at a slow rate with no downturn and the second assumes a downturn in 1990 of modest or mild proportions.

Primary forecast: continued slow economic growth nationally would result in moderate Wisconsin employment gains of about 25,000, or 1.1 percent in 1990 and 15,000, or 0.7 perent in 1991 (see Profile 1.5).

Manufacturing employment gains would be modest with proportionately more of the gain in the durable section. Employment in transportation and public utility firms would remain at about 1989 levels as productivity gains in public utilities would reduce employment slightly while transportation firms expanded by about that amount.

Mining and construction activity would decline by a slight amount resulting in a small employment loss. Trade employment would expand at a slightly slower pace in 1990 than in 1989 and would barely increase in 1990.

Finance, insurance and real estate employment levels would increase by almost as much in 1990 and 1991 as in 1989. Service employment growth would also slow with 1990 and 1991 gains only about one-half the 1989 amount.

Government employment levels would grow at a much reduced rate in 1990 and 1991 compared to expected 1989 changes.

Profile 1.6
Projected Forecast for Wisconsin Nonfarm Wage and Salary Employment
1990 and 1991 Mild Downturn
(Average Annual Employment in Thousands)

Industry	Projected			Numeric Change		Percentage Change	
	1989	1990	1991	1989-90	1990-91	1989-90	1990-91
Nonfarm Wage and Salary	2,200.0	2,167.0	2,165.0	-33.0	-2.0	-1.5	-0.1
Goods-Producing:							
Mining	2.5	2.0	2.0	-0.5	0	-20.0	0
Construction	73.5	65.0	63.0	-8.5	-2.0	-11.6	-3.1
Manufacturing	558.0	540.0	535.0	-18.0	-5.0	-3.2	-0.9
Durable Goods	343.0	330.0	325.0	-13.0	-5.0	-3.8	-1.5
Nondurable Goods	215.0	210.0	210.0	-5.0	0	-2.3	0
Service-Producing:							
Transportation and Public Utilities	100.0	97.0	96.0	-3.0	-1.0	-3.0	-1.0
Trade	519.0	512.0	515.0	-7.0	3.0	-1.3	0.6
Wholesale Trade	110.0	108.0	109.0	-2.0	1.0	-1.8	0.9
Retail Trade	409.0	404.0	406.0	-5.0	2.0	-1.2	0.5
Finance, Insurance and Real Estate	118.0	116.0	116.0	-2.0	0	-1.7	0
Services	495.0	500.0	508.0	5.0	8.0	1.0	1.6
Government	334.0	335.0	330.0	1.0	-5.0	0.3	-1.5
Federal Government	30.0	30.0	29.0	0	-1.0	0	-3.3
State Government	85.0	86.0	86.0	1.0	0	1.2	0
Local Government	219.0	219.0	215.0	0	-4.0	0	-1.8

Source: DILHR, Labor Market Information Bureau, based upon Current Employment Statistics data

Alternative forecast: a mild downturn in the national economy during 1990 would result in Wisconsin nonfarm wage and salary employment declines in both 1990 and 1991 (see Profile 1.6).

Most of the decline would occur in 1990. Goods production, especially manufacturing, would decline the most. Construction employment would also decline extensively. Declines would also occur in the transportation and public utilities and the trade industry groups in 1990.

The service industry would be the only major group showing any significant employment growth in the event a mild downturn occurs. Government would also increase employment but only by a very slight amount.

In 1991, employment declines would continue in the manufacturing and construction industry groups but by much smaller amounts than in 1990. The trade group would begin expanding employment again and the service group would increase its growth. Declining tax revenue would restrict growth in the government employment. Thus, a 1990 national recession would have an impact in Wisconsin and result in a somewhat stagnant 1991 in our state.

Comparing Changes in Total Employment with Nonfarm Wage and Salary Employment

The economy of Wisconsin is dynamic, not static, and components of the economy change in quite different ways at the various points in the business cycle. The number of workers with more than one job, the number of commuters into and out of the state and the extent to which workers are encouraged or discouraged from seeking employment affect employment and unemployment levels extensively. Thus, big variances in the amount of change in total employment levels and nonfarm wage and salary payroll levels are to be expected.

In the most recent two years total employment of 231,000 has increased substantially more than nonfarm wage and salary employment of 125,000. In the early stages of the recovery the reverse was true with 1983-1986 total employment increasing by 62,000 while nonfarm employment was up by 149,300.

Thus far in 1989, over-the-year changes in total employment, and nonfarm wage and salary employment appear to be less divergent than they have been in the prior two years. Total employment gains have averaged 89,000 over the first four months of 1989 while nonfarm wage and salary gains have averaged 68,000. Thus, the pace of total employment gains is significantly reduced over 1988 gains, while the growth of nonfarm employment in the first four months of 1989 is slightly above the 1988 amount.

Year-to-year variances in Wisconsin nonfarm wage and salary employment levels and total employment levels do not numerically change in unison. The variances in growth or decline rates between total employment and nonfarm wage and salary employment seems to be the result of technical features which reflect the limited ability of the small current population survey sample used in Wisconsin to "move as the state's economy moves." That is, a lag appears to exist in the ability of this sample to reflect in a timely way major labor force changes in Wisconsin.

Over a long period of time both data collection systems have increased proportionately. Since 1970, when the current method of estimating total employment was adopted, the total employment level has increased by 708,000, or 40.2 percent, while nonfarm wage and salary employment has grown by 618,600, or 40.4 percent. Reasons for the variations in growth or decline between the two data systems are not clear. The eventual balancing of changes emphasizes the need to compare growth or declines over several spans of time.

2 Wisconsin Population

Profiles –

2.1 Population Growth Comparison 1981–1987

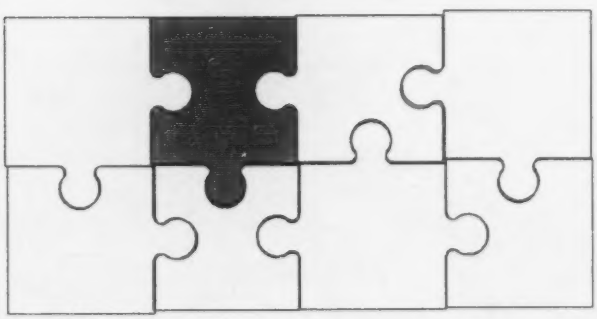
2.2 Components of Population Change 1980–1987

2.3 Metropolitan and Nonmetropolitan Population Growth 1978–1988

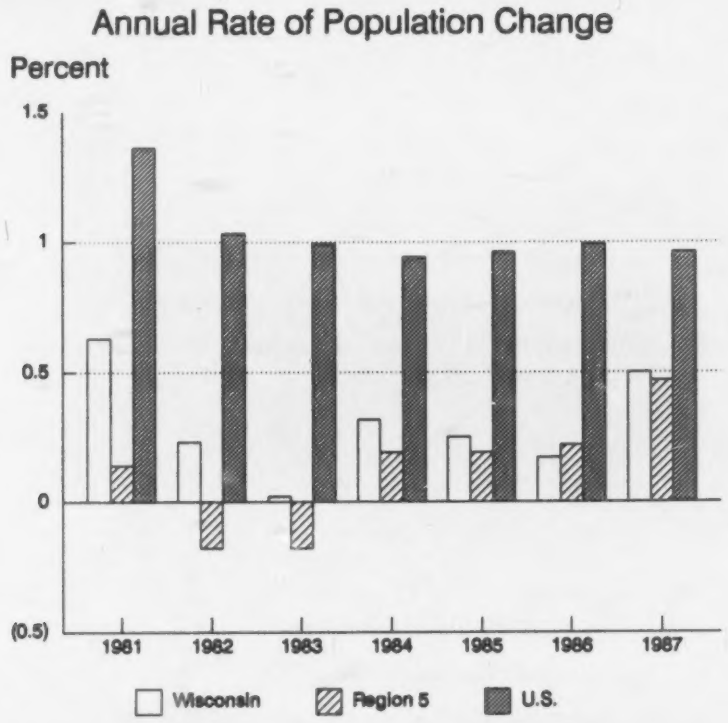
2.4 Population Age 16 and over

2.5 Population Projections 1980–2000

2.6 Racial and Ethnic Minority Populations 1980–1988



Profile 2.1 Population Growth Comparison 1981-1987



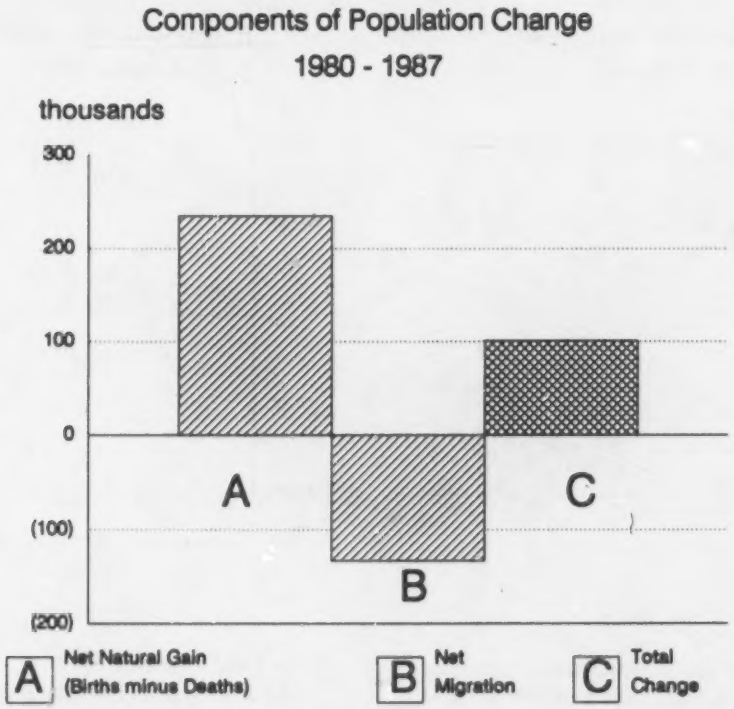
- √ In 1987 Wisconsin placed seventeenth in the nation with 1.9 percent of the U.S. population.
- √ From 1981 to 1987 Wisconsin population grew 2.1 percent.
- √ The state's population is expected to exceed five million by the year 2000; a growth of nearly 7.3 percent.
- √ Region 5: Bureau of Labor Statistics designation for the region that includes Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin.

Annual Rate of Population Change

Year	Wisconsin	Region 5	U.S.
1981	0.6%	0.1%	1.4%
1982	0.2%	-0.2%	1.0%
1983	0.0%	-0.2%	1.0%
1984	0.3%	0.2%	0.9%
1985	0.3%	0.2%	1.0%
1986	0.2%	0.2%	1.0%
1987	0.5%	0.5%	1.0%

Source: U.S. Bureau of Census, Current Population Reports, Series P-25, No. 1024

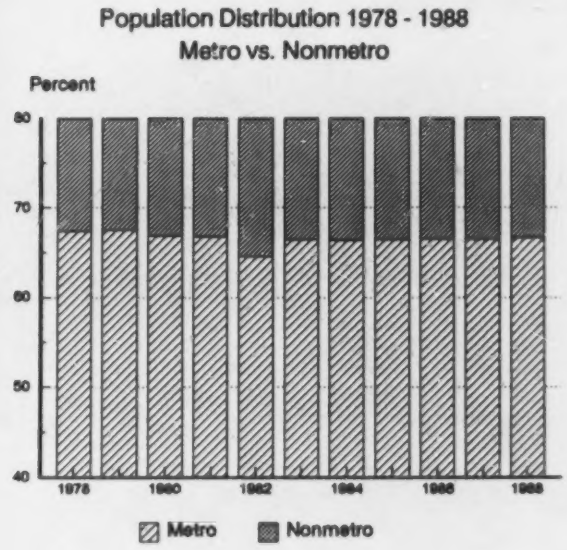
Profile 2.2 Components of Population Change 1980-1987

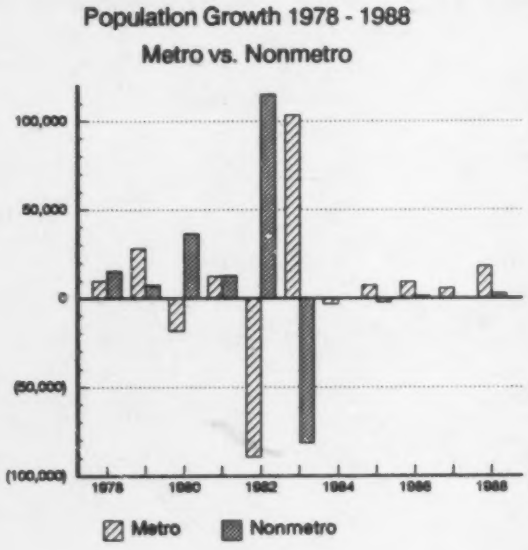


Source: Wisconsin Department of Administration, Demographic Services Center, Offical Population Estimates for 1988

- √ Net natural gain, total births minus total deaths, is the most significant component of Wisconsin's population growth.
- √ Net natural gain provides consistent long-term population growth.
- √ Net migration, in-migration minus out-migration, varies markedly from year to year.
- √ Migration patterns vary with economic conditions within Wisconsin.

Profile 2.3 Metropolitan and Nonmetropolitan Population Growth 1978-1988





√ During the early 1980's, Wisconsin's population shifted from metropolitan to nonmetropolitan counties.

√ In 1982, the metropolitan counties contained the lowest concentration of the state's population, 64.5 percent.

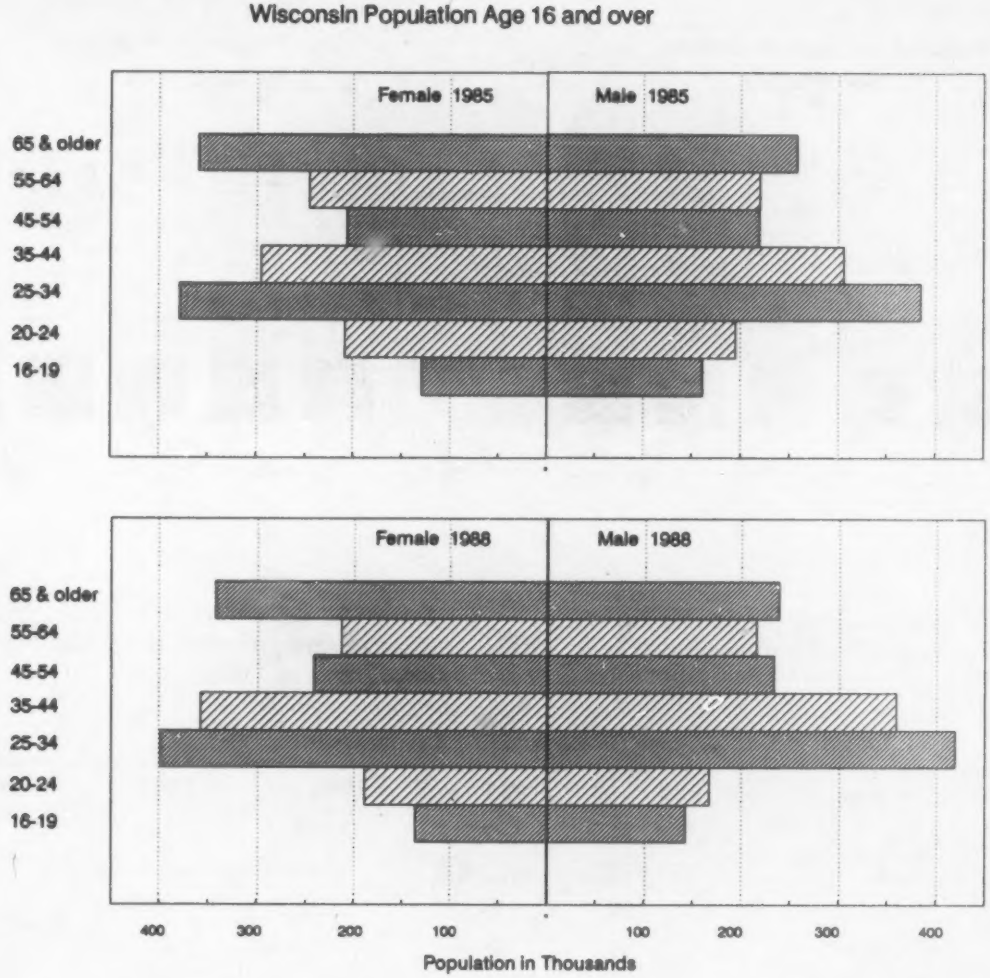
√ By 1988, metropolitan counties accounted for 66.6 percent of the statewide population.

Wisconsin Population

Year	Statewide Total	Metro Areas		Nonmetro Areas	
		Total	% of Total	Total	% of Total
1977	4,627,384	3,125,604	67.6%	1,501,780	32.5%
1978	4,652,755	3,135,431	67.4%	1,517,324	32.6%
1979	4,688,278	3,163,482	67.5%	1,524,796	32.5%
1980	4,705,642	3,144,779	66.8%	1,560,863	33.2%
1981	4,730,902	3,157,384	66.7%	1,573,518	33.3%
1982	4,756,279	3,067,929	64.5%	1,688,350	35.5%
1983	4,777,901	3,170,933	66.4%	1,606,968	33.6%
1984	4,774,383	3,167,677	66.4%	1,606,706	33.7%
1985	4,779,021	3,174,662	66.4%	1,604,359	33.6%
1986	4,789,122	3,183,702	66.5%	1,605,420	33.5%
1987	4,794,792	3,189,256	66.5%	1,605,536	33.5%
1988	4,815,502	3,207,182	66.6%	1,608,320	33.4%

Source: Wisconsin Department of Administration, Demographic Services Center, Official Population Estimates

Profile 2.4 Population Age 16 and Over

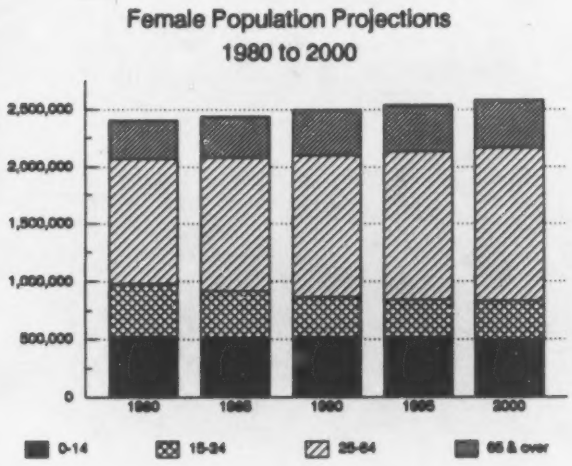


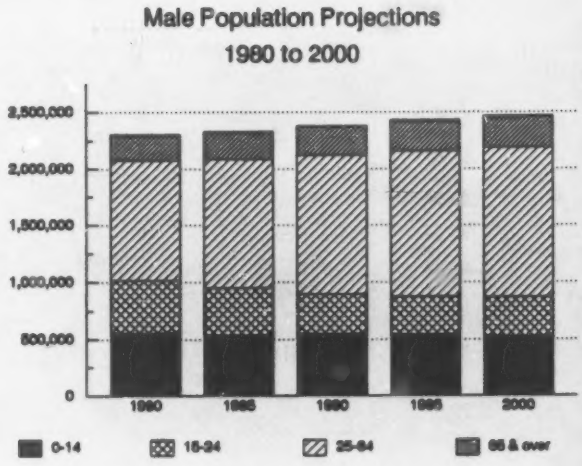
Labor Force Population (in thousands)

Females					Males				
Age	1985	1986	1987	1988	Age	1985	1986	1987	1988
16-19	129	129	134	136	16-19	162	149	146	143
20-24	208	197	187	189	20-24	196	174	180	167
25-34	379	403	409	399	25-34	386	413	423	420
35-44	295	310	320	358	35-44	307	332	328	359
45-54	207	217	231	241	45-54	220	224	224	234
55-64	245	228	230	212	55-64	221	208	219	216
65 & over	360	349	351	342	65 & over	259	250	233	239
Total	1,823	1,833	1,862	1,877	Total	1,751	1,750	1,753	1,778

Source: U.S. Bureau of Labor Statistics, Current Population Survey

Profile 2.5 Population Projections 1980-2000





√ Between 1980 and 2000, the population at ages 16 through 64 will have increased by 298,000.

√ During the same time period the number of those reaching 65 years of age and over will have grown by 133,000.

Wisconsin Population Projections

	Age	1980	1985	1990	1995	2000
Males	0-14	555,572	537,315	544,715	543,423	519,418
	15-24	459,974	412,830	351,751	333,288	346,312
	25-64	1,056,160	1,135,357	1,223,659	1,279,666	1,325,223
	65 & over	233,659	248,054	263,460	274,416	275,494
	Total	2,305,365	2,333,556	2,383,585	2,430,793	2,466,447

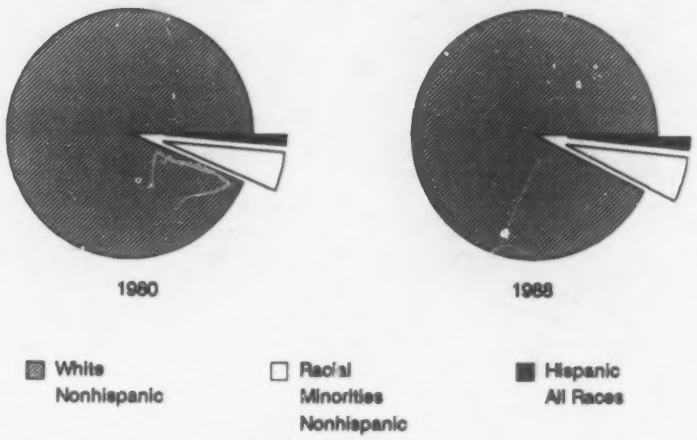
	Age	1980	1985	1990	1995	2000
Females	0-14	528,388	511,850	519,450	519,271	495,825
	15-24	456,641	405,920	343,991	325,786	339,503
	25-64	1,084,719	1,156,238	1,235,504	1,283,902	1,323,817
	65 & over	330,529	364,194	394,291	414,291	421,598
	Total	2,400,277	2,438,202	2,493,236	2,543,250	2,580,743

	Age	1980	1985	1990	1995	2000
Total	0-14	1,083,960	1,049,165	1,064,165	1,062,694	1,015,243
	15-24	916,615	818,750	695,742	659,074	685,815
	25-64	2,140,879	2,291,595	2,459,163	2,563,568	2,649,040
	65 & over	564,188	612,248	657,751	688,707	697,092
	Total	4,705,642	4,771,758	4,876,821	4,974,043	5,047,190

Source: Wisconsin Department of Administration, Demographic Services Center, Wisconsin Population Projections 1980-2020

Profile 2.6 Racial and Ethnic Minority Populations 1980 and 1988

Wisconsin Population 1980 and 1988
Racial and Ethnic Groups



√ Estimates of racial and ethnic minority populations in Wisconsin grew by over 58,000.

√ The growth represents a 19.6 percent increase during that eight year period of time.

Wisconsin Population by Race and Ethnic Groups

	Total Population	White Not Hispanic	Black Not Hispanic	American Indian Not Hispanic	Other Races Not Hispanic	Hispanic All Races
1980 Population	4,705,767	4,407,822	181,567	29,848	23,748	62,782
Percent of Total	100.0%	93.7%	3.9%	0.6%	0.5%	1.3%
1988 Population	4,749,653	4,393,274	200,547	31,937	43,026	80,869
Percent of Total	100.0%	92.5%	4.2%	0.7%	0.9%	1.7%

Source: DILHR, Labor Market Information Bureau, 1980 Census of Population and 1988 Affirmative Action Data estimates

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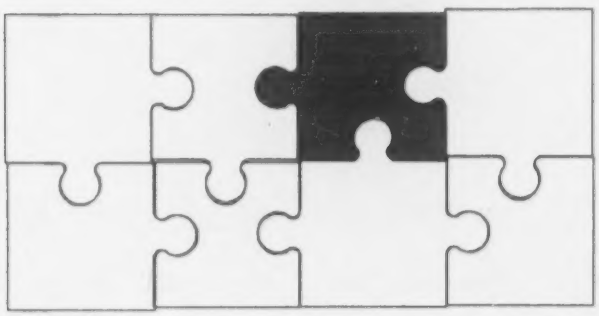
3 Wisconsin Labor Force

Profiles -

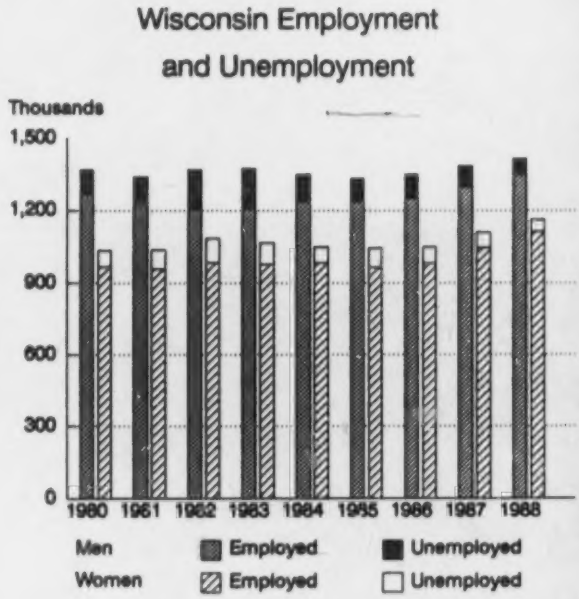
3.1 Labor Force, Employment and Unemployment 1980-1988

3.2 Labor Force Projections

3.3 Labor Force 1977-1988



Profile 3.1 Labor Force Employment and Unemployment 1980-1988



- √ Wisconsin's civilian labor force grew by 174,000 from 1980 through 1988.
- √ The labor force participation rate for men averaged 78.7 percent from 1980 through 1988.
- √ The participation rate for women averaged 58.0 percent from 1980 through 1988.
- √ Unemployment among men peaked in 1983 at 12.1 percent and has decreased to 4.5 percent in 1988.
- √ Unemployment for women peaked in 1982 at 9.3 percent and has decreased to 3.9 percent in 1988.

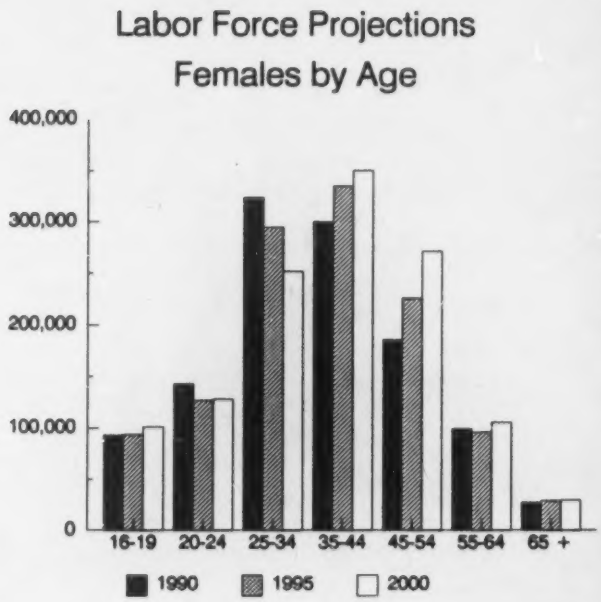
Profile 3.1 Labor Force Employment and Unemployment 1980-1988 (continued)

Wisconsin Labor Force, Employment and Unemployment by Gender and Year (in thousands of workers)

Civilian Labor Force		Labor Force Participation Rate	Employment	Unemployment	
				Amount	Rate
1980					
Male	1,368	79.8%	1,268	100	7.3%
Female	1,032	56.3%	964	68	6.6%
1981					
Male	1,337	79.6%	1,230	107	8.0%
Female	1,034	56.3%	956	78	7.6%
1982					
Male	1,366	80.1%	1,206	160	11.7%
Female	1,084	58.7%	983	101	9.3%
1983					
Male	1,373	79.5%	1,206	166	12.1%
Female	1,063	58.1%	975	88	8.3%
1984					
Male	1,346	77.9%	1,237	110	8.1%
Female	1,047	57.1%	981	66	6.3%
1985					
Male	1,333	76.1%	1,238	95	7.1%
Female	1,040	57.1%	965	76	7.3%
1986					
Male	1,350	77.1%	1,251	99	7.4%
Female	1,049	57.2%	979	70	6.6%
1987					
Male	1,384	79.0%	1,294	90	6.5%
Female	1,107	59.4%	1,045	62	5.6%
1988					
Male	1,415	79.6%	1,351	64	4.5%
Female	1,160	61.8%	1,114	46	3.9%

Source: U.S. Bureau of Labor Statistics, Current Population Survey

Profile 3.2 Labor Force Projections



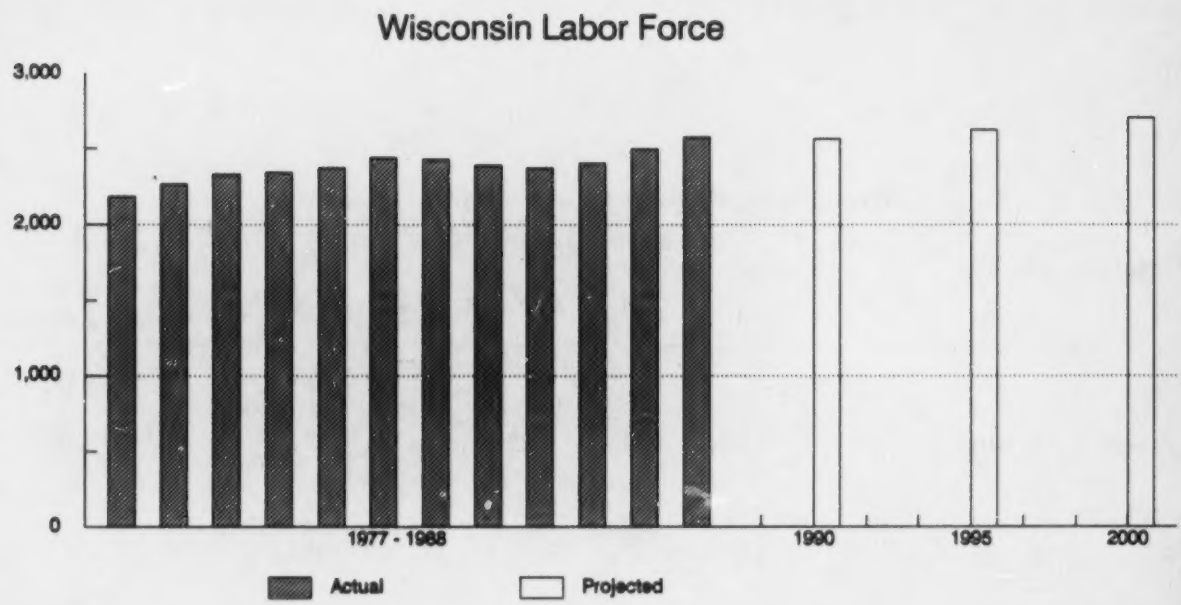
- √ Labor force size should continue to grow to the year 2000, reaching about 2,707,000 if present labor force participation rates remain constant.
- √ The participation rates for both men and women decline substantially after age 54, and there is a large segment of the population, the post war baby boom generation, approaching that age.
- √ The participation rate drop of the baby boom cohort will affect the labor force levels, but it probably will not occur until after the turn of the century.
- √ In 1990, the largest age cohort in the labor force will be the 25 to 34 year old group; in 2000, the largest group will be 35 to 44 year olds.
- √ Labor force projections are derived by applying the labor force participation rates to the corresponding population figure.

Wisconsin Population and Labor Force Projections

Population	Age							Totals	
	16-19	20-24	25-34	35-44	45-54	55-64	65 & over	By Gender	Males + Females
1990									
Male	135,373	182,535	424,353	368,102	234,332	196,872	263,460	1,805,027	
Female	131,546	179,558	425,122	361,723	238,286	210,373	394,291	1,940,899	3,745,926
1995									
Male	137,098	161,916	389,799	407,804	289,922	192,141	274,416	1,853,096	
Female	132,782	159,809	386,651	403,478	289,984	203,789	414,291	1,990,784	3,843,880
2000									
Male	145,956	163,867	333,447	424,042	354,265	213,469	275,494	1,910,540	
Female	143,014	160,735	329,593	421,830	348,628	223,766	421,593	2,049,159	3,959,699
Labor Force Participation Rates									
1987									
Male	0.723	0.877	0.953	0.969	0.945	0.708	0.184		
Female	0.707	0.796	0.763	0.830	0.780	0.471	0.070		
Labor Force Projections									
1990									
Male	97,875	160,083	404,408	356,691	221,444	139,385	48,477	1,428,363	
Female	93,003	142,928	324,368	300,230	185,863	99,086	27,600	1,173,078	2,601,441
1995									
Male	99,122	142,000	371,478	395,162	273,976	136,036	50,493	1,468,267	
Female	93,877	127,208	295,015	334,887	226,188	95,985	29,000	1,202,159	2,670,426
2000									
Male	105,526	143,711	317,775	410,897	334,780	151,136	50,691	1,514,517	
Female	101,111	127,945	251,479	350,119	271,930	105,394	29,512	1,237,489	2,752,006

Source: Wisconsin Department of Administration, Demographic Services Center, Population Projections, U.S. Bureau of Labor Statistics, Current Population Survey, Labor Force Participation Rates

Profile 3.3 Labor Force 1977-1988



- √ Wisconsin's labor force has grown by 395,000 during the eleven year period from 1977 through 1988.
- √ The growth follows the pattern of the economic recession and recovery with labor force contractions in 1983, 1984 and 1985.
- √ During 1986, the labor force again expanded, growing larger than the pre-recession level.
- √ The current number of Wisconsin people working or actively seeking jobs has grown to a record level of 2,575,000.

Wisconsin Labor Force 1977 to 1988

Year	Statewide		Metro Areas		Nonmetro Areas	
	Labor Force	% Change from 1977	Labor Force	% Change from 1977	Labor Force	% Change from 1977
1977	2,180,000	Base Year	1,483,100	Base Year	696,900	Base Year
1978	2,263,000	3.8%	1,539,400	3.8%	723,600	3.8%
1979	2,331,000	6.9%	1,587,200	7.0%	743,800	6.7%
1980	2,339,000	7.3%	1,607,400	8.4%	731,600	5.0%
1981	2,370,000	8.7%	1,627,400	9.7%	742,600	6.6%
1982	2,440,000	11.9%	1,633,100	10.1%	806,900	15.8%
1983	2,425,000	11.2%	1,661,800	12.1%	763,200	9.5%
1984	2,389,000	9.6%	1,641,200	10.7%	747,800	7.3%
1985	2,373,000	8.9%	1,622,500	9.4%	750,500	7.7%
1986	2,403,000	10.2%	1,650,900	11.3%	752,100	7.9%
1987	2,494,000	14.4%	1,721,400	16.1%	772,600	10.9%
1988	2,575,000	18.1%	1,775,800	19.7%	799,200	14.7%

Source: DILHR, Labor Market Information Bureau, Local Area Unemployment Statistics Program

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4.1 Employment Gains by Size of Business March 1984–March 1988

4.2 Number of Business Units by Industry March 1984–March 1988

4.3 Industry Division–Level Employment March 1984–March 1988

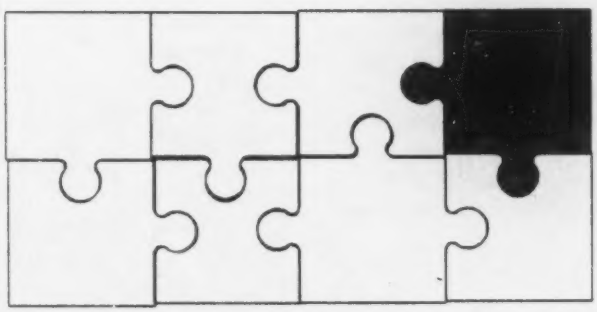
4.4 Largest Industry–Employment Levels

4.5 Smallest Industry–Employment Levels

4.6 Numeric Increases by Industry–Employment Levels

4.7 Numeric Declines by Industry–Employment Levels

4.8 Percent Increases by Industry–Employment Levels



Wisconsin Industrial-Demand Economic Outlook

Industrial Classification Changes Affect Wisconsin

To classify and to measure a thing is to know that thing. That is an assumption governments have adopted since the first census was taken thousands of years ago. And, with the advent of our complex and technological society, the bureaucratic penchant to classify and count extends out to include employers and businesses.

Actually, classifying business units is a necessary, rather than frivolous, activity. It does bring order to our huge, extremely diverse, and rapidly changing productive system. It does facilitate estimates of the levels of economic activity and, thus, aids economic planning. And it does permit an equitable tax system which benefits laid off workers. Employment information is the primary data source for state and local economic analysis.

Officials classify all employers who participate in Wisconsin's Unemployment Compensation program, sorting each according to the type of activity in which the employer is engaged. The principal product or group of products produced or distributed, or the services rendered determine the primary activity of an employer. Once this primary activity has been determined, by a survey questionnaire process, the officials assign each employer a four-digit numeric code. This numeric code is known as the Standard Industrial Classification (SIC).

The majority of all employers throughout the U.S. are classified using the SIC. The federal Office of Management and Budget (OMB) maintains the classification system and its associated definitions. The strict control of the coding structure by OMB ensures uniformity and comparability of data produced using the SIC. The Office of Management and Budget produces a volume of all SIC codes in a seven-hundred page book entitled the *Standard Industrial Classification Manual.*

The classification covers the entire field of economic activity and defines industries in accordance with the composition and structure of the economy. The first digit of the SIC code designates broad industrial divisions, such as manufacturing, service, or government. The second, third, and fourth digit denote the subclassification of industries which compose the major divisions.

Periodically, the SIC is revised to reflect the economy's changing industrial organization. When a revision is made, it is possible, and in fact likely, that the changes will affect most business firms at the third or fourth digit classification level. A few, but not many, firms actually are reclassified to a different major industrial division.

A new SIC structure based on the 1987 SIC Manual, the newest edition, will replace an older 1972 based structure.

In Wisconsin's economy, the impact of the switch from the 1972 to the 1987 SIC can be analyzed by overlaying the two coding structures and then comparing employment data pertaining to a specific time. By summarizing the employment data at various levels of detail, we can learn the magnitude of change caused by the new SIC structure.

The major divisions of Wisconsin's economy, as well as the rest of the nation's, are comprised of the following categories:

Agriculture, Forestry and Fishing
Mining
Construction
Manufacturing
Transportation, Communication, Electric, Gas and Sanitary Services
Wholesale Trade
Retail Trade
Finance, Insurance and Real Estate
Services
Public Administration (government)

At the major division level, using March 1988 employment data from *Employment and Wages Covered by Wisconsin's U.C. Law*, the only divisions affected by the SIC change are wholesale and retail trade. A total of 695 employees, associated with one-hundred business firms, have been reclassified from retail to wholesale trade. That change resulted from reclassifying an industry at a very detailed level; firms selling used motor-vehicle parts were moved from the retail to the wholesale division. The effect of the new coding structure is very minor at Wisconsin's division level classification.

At the two-digit level, looking at private nongovernment employers, 25 industries have been affected by the 1987 revision. Most notable is the creation of a new industry, SIC 87, "Engineering, accounting, research, management, and related services." This new service industry derived most of its employment from industries classified in the old 1972 SIC as business services and as miscellaneous services. The new industry has a March 1988 employment level of 25,595 people.

Another notable shift is the exodus of some previously classified electrical manufacturers to "Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks", industry group SIC 38.

The movement of savings and loan associations into the banking industry, SIC 60, also accounted for a large shift. The SIC 60 classification is now entitled "Depository institution."

The three-digit industry analysis shows 107 industrial classifications being affected by the SIC revision. At the four-digit level, 397 industry classifications have been affected. Of these, a total of 194 are new SIC classifications and a total of 139 old SIC's were eliminated. The rest of the revisions were disbursed throughout the remainder of the four-digit level.

Timing of introduction of the new 1987 SIC will vary from data series to data series. The publication *Employment and Wages Covered by Wisconsin's U.C. Law* will use the 1987 SIC in all of its publications referring to 1988 and on. The Current Employment Statistics data series which are published in the *Wisconsin Economic Indicators* and the small county employment estimates which are published in the *Employment Reviews* will not use the 1987 SIC until publication of data pertaining to 1990. Needless to say, the new 1987 SIC structure will impact heavily upon data users. The data user should be aware of which SIC is being utilized because of the magnitude of changes associated with the 1987 SIC introduction.

In this chapter, the data used from the years 1987 or earlier, are from the 1972 SIC coding structure. March 1988 data are derived from the new 1987 SIC coding structure.

Profile 4.1 Employment-Level Gains by Size of Business Unit March 1984-March 1988

- √ The period from March 1984 through March 1988 was one of economic recovery and expansion.
- √ The current classification of business units by size (1 to 4, 5 to 9, etc.) was first used in 1984.
- √ At the national level much has been made of the expansion of employment (creation of jobs) in business units with less than 500 employees. Wisconsin's experience is similar to that of the nation as a whole.
- √ In Wisconsin, business units with 500 or more employees represented 29.4 percent of total-covered-employment in March 1984. Through March 1988, the same business units provided only 10.7 percent of the gain in jobs, slightly more than one-third of their proportionate share of employment.
- √ Business units with 1,000 or more employees, which represented 19.4 percent of the total in 1984, had only 6.6 percent additional workers in March 1988.
- √ Job creation gains within the small business units are under-represented.
- √ Business units with less than ten employees, which represented 12.1 percent of employment in 1984, had only 6.9 percent more workers in March 1988.
- √ Business units with 50 to 499 employees in March 1984 added more than their 36.5 percent proportionate share of jobs through March 1988. In the four year period 126,041 additional workers, or 55.4 percent were added.
- √ The small and the large Wisconsin business units (under ten and over 1,000 employees) added disproportionately small numbers of employees between March 1984 and March 1988.

Distribution of Employment Level Gains By Size of Business Unit

Business Unit Size	Employment Level March 1984	Percent of Total	Employment Level March 1988	Change		Percent of Total Numeric Change
				Numeric	Percent	
Total	1,828,953	100.0%	2,028,730	199,777	10.9%	100.0%
1 to 4	94,975	5.2%	98,625	3,650	3.8%	1.8%
5 to 9	126,567	6.9%	130,430	3,863	3.1%	1.9%
10 to 19	158,971	8.7%	173,894	14,923	9.4%	7.5%
20 to 49	244,407	13.4%	274,315	29,908	12.2%	15.0%
50 to 99	200,933	11.0%	237,102	36,169	18.0%	18.1%
100 to 249	269,628	14.7%	330,036	60,408	22.4%	30.2%
250 to 499	196,797	10.8%	226,261	29,464	15.0%	14.7%
500 to 999	182,128	10.0%	190,315	8,187	4.5%	4.1%
1,000+	354,547	19.4%	367,752	13,205	3.7%	6.6%

Source: DILHR, Labor Market Information Bureau, Wisconsin Covered Employment by Size of Reporting Unit, Table 221

Profile 4.2 Number of Reporting Business Units by Industry March 1984-March 1988

- √ During the four years (1984-1988) of recovery and expansion, the Wisconsin Unemployment Compensation (U.C.) system recorded an increase of 6,097, or 7.0 percent in the number of business units with one or more employees.
- √ Two industry groups, the small mining group (mostly sand and gravel mining) and the large retail trade group, had declines in the number of business units reporting.
- √ The retail trade decline of 116 business units was only a 0.5 percent decline, but occurred in an industry group that increased its employment total by 45,659, or 13.7 percent, during the four year period. (See Profile 4.3.)
- √ Due to the SIC revisions 100 business units were transferred (on paper) from the retail trade division to the wholesale trade division.

Changes in Number of Reporting Business Units by Industry March 1984 – March 1988

Industry	Business Unit Totals		Change		Percent of Total Numeric Change
	March 1984	March 1988	Numeric	Percent	
Entire State	87,639	93,736	6,097	7.0%	100.0%
All Government	3,462	4,376	914	26.4%	15.0%
All Private	84,177	89,360	5,183	6.2%	85.0%
Agriculture, Forestry and Fishing	1,274	1,451	177	13.9%	2.9%
Mining	146	135	-11	-7.5%	-0.2%
Construction	7,668	8,371	703	9.2%	11.5%
Manufacturing	8,069	8,626	557	6.9%	9.1%
Transportation, Communication and Public Utilities	4,091	4,454	363	8.9%	6.0%
Wholesale Trade	8,553	9,093	540	6.3%	8.9%
Retail Trade	23,193	23,077	-116	-0.5%	-1.9%
Finance, Insurance and Real Estate	6,918	7,197	279	4.0%	4.6%
Service	24,263	26,949	2,686	11.1%	44.1%
Nonclassified	2	9	7	350.0%	0.1%

Source: DILHR, Labor Market Information Bureau, Wisconsin Covered Employment by Size of Reporting Unit, Table 221

Profile 4.3 Industry Division-Level Employment March 1984-March 1988

- √ Industry employment gains in the period from March 1984 to March 1988 were above average in all private industry groupings except manufacturing.
- √ The largest percent gain occurred in the construction industry, which increased by 25.9 percent. Other above average percent gains occurred in the small agricultural, fishing and forestry group, up 20.7 percent; and service, up 17.1 percent.
- √ Mining, up 15.0 percent; and retail trade, up 14.0 percent represent an industry wide average.
- √ Services with 61,480 workers followed by retail trade with 45,659 workers and manufacturing with 32,339 workers represent major growth industries.
- √ Government employment growth was the slowest, up only 4.0 percent over the four-year period.

Changes in Employment-Levels By Industry
March 1984 – March 1988

Industry	Employment			Change		Percent of Total Numeric Change
	March 1984		March 1988	Numeric	Percent	
	Total	Percent of 1984 Total	Total			
Entire State	1,828,953	100.0%	2,028,730	199,777	10.9%	100.0%
All Government	292,393	16.0%	304,164	11,771	4.0%	5.9%
All Private	1,536,560	84.0%	1,724,566	188,006	12.2%	94.1%
Agriculture, Forestry and Fishing	11,214	0.6%	13,538	2,324	20.7%	1.2%
Mining	1,349	0.1%	1,552	203	15.0%	0.1%
Construction	49,645	2.7%	62,509	12,864	25.9%	6.4%
Manufacturing	503,977	27.6%	536,316	32,339	6.4%	16.2%
Transportation, Communication and Public Utilities	82,361	4.5%	91,473	9,112	11.1%	4.6%
Wholesale Trade	96,723	5.3%	108,248	11,525	11.9%	5.8%
Retail Trade	333,546	18.2%	379,205	45,659	13.7%	22.9%
Finance, Insurance and Real Estate	98,252	5.4%	110,746	12,494	12.7%	6.3%
Services	359,481	19.7%	420,961	61,480	17.1%	30.8%
Nonclassified	12	*	18	6	50.0%	*

* Less than 0.05 percent.

Source: DILHR, Labor Market Information Bureau, Wisconsin Covered Employment by Size of Reporting Unit, Table 221

Profile 4.4 Largest Industry-Employment Levels

- √ Educational services, both public and private, added 5,316 workers.
- √ Wholesale trade had 4,714 more workers in 1987, with the increases widely distributed throughout the third and fourth digit levels (see Appendix B).
- √ Fabricated metal products increased slightly over the 1982-1987 period with expectations of 1988 data showing a significant increase in employment levels.
- √ Paper and allied products manufacturing increased marginally as miscellaneous converted products and paperboard containers and boxes added some workers (see Appendix B).
- √ Transportation equipment manufacturing provided 3,018 more jobs in 1987 than in 1982 as the shutdown of the large automobile assembly operation would not affect industry employment levels until well into 1989.

1987 Industry Groups with Largest Employment Levels
Covered Employment Information by Two Digit SIC* Code

SIC Code	Industry Title	Average Monthly Employment		Change From 1982 – 1987	
		1982	1987	Numeric	Percent
80	Medical and Other Health Services	165,390	177,959	12,569	7.6%
82	Educational Services	140,567	145,883	5,316	3.8%
58	Eating and Drinking Places	121,649	142,318	20,669	17.0%
35	Machinery, Except Electrical	104,092	103,073	-1,019	-1.0%
73	Miscellaneous Business Services	45,031	77,990	32,959	73.2%
20	Food and Kindred Products	62,773	62,493	-280	-0.5%
50	Wholesale Trade - Durable Goods	53,800	58,514	4,714	8.8%
54	Food Stores	51,364	55,521	4,157	8.1%
34	Fabricated Metal Products	50,900	52,775	1,875	3.7%
59	Miscellaneous Retail Stores	41,291	51,565	10,275	24.9%
26	Paper and Allied Products	46,675	49,263	2,588	5.5%
53	Retail General Merchandise	44,974	48,525	3,551	7.9%
51	Wholesale Trade - Nondurable Goods	42,836	47,114	4,278	10.0%
36	Electrical Equipment and Supplies	50,778	46,772	-4,006	-7.9%
17	Special Trade Contractors	33,689	44,011	10,322	30.6%
27	Printing and Publishing	32,512	41,072	8,560	26.3%
55	Automotive Dealers and Service Stations	32,392	41,011	8,619	26.6%
63	Insurance Carriers	31,676	35,680	4,004	12.6%
42	Trucking and Warehousing	27,295	35,233	7,938	29.1%
37	Transportation Equipment	29,829	32,847	3,018	10.1%

* SIC = Standard Industrial Classification

Source: DILHR, Labor Market Information Bureau, unpublished data from Covered Employment and Wages series

Profile 4.5 Smallest Industry-Employment Levels

- √ The number of wage and salary workers engaged by the forestry, fishing, and hunting and trapping industries changed very little between 1982 and 1987.
- √ About 324 workers were added to the agricultural livestock production industry.
- √ Private households covered by the unemployment compensation system added about 584 workers between 1982 and 1987.
- √ Transportation services employed 903 more workers in 1987.
- √ Miscellaneous repair services added over 500 workers with no single type of repair service providing the majority of employment (see Appendix B).
- √ Textile mill products and apparel and other textile products had minor changes over the five year period.
- √ Security, commodity brokers and services grew by over 1,500 employees, with most of the gain coming from security brokers and dealers (see Appendix B).

1987 Industry Groups with Smallest Employment-Levels
Covered Employment Information by Two Digit SIC* Code

SIC Code	Industry Title	Average Monthly Employment		Change From 1982 – 1987	
		1982	1987	Numeric	Percent
09	Fishing, Hunting and Trapping	39	28	-11	-28.2%
10	Metal Mining	240	37	-203	-84.6%
66	Combined Real Estate, Insurance, Etc.	333	164	-169	-50.8%
29	Petroleum and Coal Products	380	330	-50	-13.2%
84	Museums, Botanical, Zoological Gardens	609	816	207	34.0%
44	Water Transportation	1,190	960	-230	-19.3%
67	Holding and Other Investment Companies	2,018	1,866	-152	-7.5%
14	Nonmetallic Minerals, Except Fuels	1,632	1,874	242	14.8%
02	Agricultural Production - Livestock	1,673	1,997	324	19.4%
78	Motion Pictures	2,458	2,050	-408	-16.6%
88	Private Households	1,532	2,116	584	38.1%
93	Public Finance, Taxation and Monetary	2,550	2,729	179	7.0%
45	Transportation by Air	2,121	2,897	776	36.6%
47	Transportation Services	2,458	3,361	903	36.7%
97	National Security, International Affairs	3,180	3,538	358	11.3%
76	Miscellaneous Repair Services	3,662	4,199	537	14.7%
22	Textile Mill Products	4,035	4,324	289	7.2%
62	Security, Commodity Brokers and Services	2,939	4,461	1,522	51.8%
95	Administration of Environment, Quality	4,317	5,206	889	20.6%
01	Agricultural Production - Crops	5,387	5,414	27	0.5%

* SIC = Standard Industrial Classification
Note: Industries with suppressed employment levels are not included in this ranking

Source: DILHR, Labor Market Information Bureau, unpublished data from Covered Employment and Wages series

Profile 4.6 Numeric Increases by Industry-Employment Levels

- √ Eating and drinking places employing over 142,000 workers, provided over 20,000 additional jobs over the five year period from 1982-1987.
- √ Public and private medical and other health services, the largest service category with almost 178,000 workers in 1987, added 12,569 jobs despite a decline of almost 10,400 jobs in hospitals (see Appendix B).
- √ Social services added over 6,000 workers between 1982 and 1987.
- √ Personal services, which employed about 20,200 in 1982, increased that total by 4,514 to about 24,800 in 1987.

Largest Numeric Increases in Employment-Levels by Industry Groups
Covered Employment Information by Two Digit SIC* Code

SIC Code	Industry Title	Average Monthly Employment		Change From 1982 – 1987	
		1982	1987	Numeric	Percent
73	Miscellaneous Business Services	45,031	77,990	32,959	73.2%
58	Eating and Drinking Places	121,649	142,318	20,669	17.0%
80	Medical and Other Health Services	165,390	177,959	12,569	7.6%
17	Special Trade Contractors	33,689	44,011	10,322	30.6%
59	Miscellaneous Retail Stores	41,291	51,566	10,275	24.9%
30	Rubber and Plastics Products, NEC*	16,502	25,508	9,006	54.6%
55	Automotive Dealers and Service Stations	32,392	41,011	8,619	26.6%
27	Printing and Publishing	32,512	41,072	8,560	26.3%
24	Lumber and Wood Products	18,288	26,636	8,348	45.7%
42	Trucking and Warehousing	27,295	35,233	7,938	29.1%
83	Social Services	24,934	30,992	6,058	24.3%
82	Educational Services	140,567	145,883	5,316	3.8%
50	Wholesale Trade - Durable Goods	53,800	58,514	4,714	8.8%
72	Personal Services	20,249	24,763	4,514	22.3%
51	Wholesale Trade - Nondurable Goods	42,836	47,114	4,278	10.0%
61	Credit Agencies Other Than Banks	12,202	16,426	4,224	34.6%
54	Food Stores	51,364	55,521	4,157	8.1%
63	Insurance Carriers	31,676	35,680	4,004	12.6%
15	General Building Contractors	15,491	19,483	3,992	25.8%
57	Furniture and Home Furnishings Stores	10,785	14,630	3,845	35.7%

* SIC = Standard Industrial Classification
NEC = Not Elsewhere Classified

Source: DILHR, Labor Market Information Bureau, unpublished data from Covered Employment and Wages series

Profile 4.7 Numeric Declines by Industry-Employment Levels

- √ Communication businesses provided 1,905 fewer jobs in 1987, with a decline of almost 2,300 occurring in telephone communications business (see Appendix B).
- √ Leather and leather products employers continued to provide less employment even in this period of general economic recovery.
- √ Primary metal industries had not yet recovered and provided 1,502 fewer jobs in 1987 than in 1982.
- √ Machinery except electrical, Wisconsin's largest manufacturing industry with over 100,000 jobs, had fewer workers in 1987 than in the 1982 recession year.
- √ Employment declined by 408 at motion picture theaters while increasing by almost 2,200 at other amusement and recreational services (see Appendix B).
- √ Metal mining all but disappeared. Metal mining lost 84.6 percent of its 1982 annual average employment by 1987.
- √ Combined real estate and insurance businesses reduced the number of workers they employed by 50.8 percent, although the number of jobs lost was only about 170.
- √ Petroleum and coal products, an industry which has never provided a significant number of workers in the state, declined slightly over the five year period.

Numeric Declines in Industry Group Employment-Levels
Covered Employment Information by Two Digit SIC* Code

SIC Code	Industry Title	Average Monthly Employment		Change From 1982 – 1987	
		1982	1987	Numeric	Percent
36	Electrical Equipment and Supplies	50,778	46,772	-4,006	-7.9%
94	Administration of Human Resources Programs	12,795	8,907	-3,888	-30.4%
48	Communication	20,373	18,468	-1,905	-9.4%
31	Leather and Leather Products	8,672	6,837	-1,835	-21.2%
33	Primary Metal Industries	19,936	18,434	-1,502	-7.5%
35	Machinery, Except Electrical	104,092	103,073	-1,019	-1.0%
39	Miscellaneous Manufacturing Industries	10,120	9,125	-995	-9.8%
78	Motion Pictures	2,458	2,050	-408	-16.6%
20	Food and Kindred Products	62,773	62,493	-280	-0.5%
44	Water Transportation	1,190	960	-230	-19.3%
10	Metal Mining	240	37	-203	-84.6%
66	Combined Real Estate, Insurance, Etc.	333	164	-169	-50.8%
67	Holding and Other Investment Companies	2,018	1,866	-152	-7.5%
29	Petroleum and Coal Products	380	330	-50	-13.2%
09	Fishing, Hunting and Trapping	39	28	-11	-28.2%

* SIC = Standard Industrial Classification
Note: Industries with suppressed employment levels are not included in this ranking

Source: DILHR, Labor Market Information Bureau, unpublished data from Covered Employment and Wages series

Profile 4.8 Percent Increases by Industry-Employment Levels

- √ Miscellaneous business services, the second largest grouping of jobs in the service division, with almost 78,000 workers in 1987, had the largest percentage increase over the five year period, 73.2 percent.
- √ Museums, botanical and zoological gardens added 207 workers for a 34.0 percent increase in workers.
- √ All three construction groups: general building, heavy construction, and special trade increased substantially between 1982 and 1987, rebounding from the recession(s) of the early 1980's.
- √ Miscellaneous services increased by almost 3,500 jobs for a 25.6 percent gain. An additional 2,000 workers were employed in engineering and architectural service businesses and 1,300 more were working for accounting, auditing and bookkeeping businesses (see Appendix B).

Largest Percent Increases in Industrial Group Employment-Levels
Covered Employment Information by Two Digit SIC* Code

SIC Code	Industry Title	Average Monthly Employment		Change From 1982 – 1987	
		1982	1987	Numeric	Percent
73	Miscellaneous Business Services	45,031	77,990	32,959	73.2%
30	Rubber and Plastics Products, NEC*	16,502	25,508	9,006	54.6%
62	Security, Commodity Brokers and Services	2,939	4,461	1,522	51.8%
24	Lumber and Wood Products	18,288	26,636	8,348	45.7%
07	Agriculture Services	6,247	8,893	2,646	42.4%
88	Private Households	1,532	2,116	584	38.1%
47	Transportation Services	2,458	3,361	903	36.7%
45	Transportation by Air	2,121	2,897	776	36.6%
57	Furniture and Home Furnishings Stores	10,785	14,630	3,845	35.7%
61	Credit Agencies Other Than Banks	12,202	16,426	4,224	34.6%
84	Museums, Botanical, Zoological Gardens	609	816	207	34.0%
75	Auto Repair, Services and Garages	9,336	12,479	3,143	33.7%
16	Heavy Construction Contractors	7,943	10,542	2,599	32.7%
17	Special Trade Contractors	33,689	44,011	10,322	30.6%
42	Trucking and Warehousing	27,295	35,233	7,938	29.1%
64	Insurance Agents, Brokers and Service	7,544	9,654	2,110	28.0%
55	Automotive Dealers and Service Stations	32,392	41,011	8,619	26.6%
27	Printing and Publishing	32,512	41,072	8,560	26.3%
15	General Building Contractors	15,491	19,483	3,992	25.8%
89	Miscellaneous Services	13,511	16,973	3,462	25.6%

* SIC = Standard Industrial Classification
NEC = Not Elsewhere Classified

Source: DILHR, Labor Market Information Bureau, unpublished data from Covered Employment and Wages series

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5 Wisconsin's Occupational-Demand Economic Outlook

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5.1 Greatest Expected Employment in the Year 2000

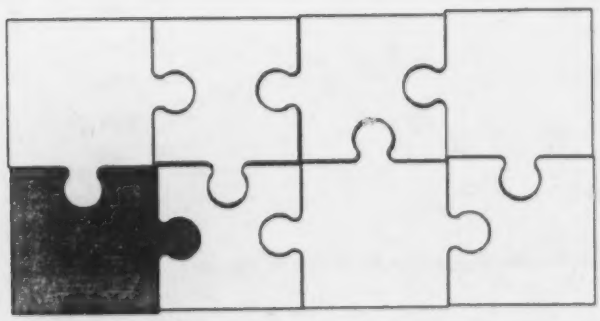
5.2 Fastest Growing Occupations

5.3 Fastest Declining Occupations

5.4 Greatest Numerical Growth

5.5 Most Annual Job Openings

5.6 Self-Employed in Year 2000



Profile 5.1 Greatest Expected Employment in the Year 2000

- √ The five leading occupations in 2000 were the leaders in 1986.
- √ The occupations represent a mix of skill levels and training.
- √ The need for bookkeepers and account clerks remains constant during the 14 year period.
- √ Registered nurses with an almost 43 percent increase, and teachers with slightly more than a 32 percent increase are part of the rapidly growing professional, paraprofessional and technical occupations cluster.
- √ Seven out of 20 occupations are in the service field. These occupations require minimal skill training.

Occupations with the Greatest Employment in the Year 2000
Wisconsin 1986 to 2000

Occupation Title	Estimated Employment		Percentage Change
	1986	2000	
Salespersons, Retail	67,260	86,350	28.4%
General Secretaries	49,980	59,070	18.2%
General Managers and Top Executives	46,450	56,020	20.6%
Waiters and Waitresses	45,300	55,290	22.1%
Janitors and Cleaners, Excluding Maids	44,340	53,810	21.4%
General Office Clerks	44,760	52,060	16.3%
Cashiers	39,700	48,640	22.5%
Registered Nurses	31,200	44,520	42.7%
Nursing Aides and Orderlies	35,040	42,960	22.6%
Bookkeeping and Accounting Clerks	41,730	41,800	0.2%
Bartenders	30,610	37,200	21.5%
Sales Representatives, Excluding Scientific and Retail	31,370	36,920	17.7%
Teachers, Secondary School	30,240	35,370	17.0%
Teachers, Elementary	27,630	31,850	15.3%
Truck Drivers, Heavy	28,540	31,390	10.0%
Hairdressers and Cosmetologists	19,210	25,130	30.8%
Stock Clerks, Sales Floor	21,700	25,060	15.5%
Food Preparation Workers	20,340	24,110	18.5%
Maintenance Repairers, General Utilities	19,530	23,610	20.9%
Hand Packers and Packagers	17,940	20,010	11.6%

Source: DILHR, Labor Market Information Bureau, Occupational Projections to 2000, 1989

Profile 5.2 Fastest Growing Occupations

- √ The fastest growing occupations may not represent the highest number of persons employed.
- √ All the occupations require some post-secondary training.
- √ Almost half of the occupations are in the expanding medical field.
- √ Of the 20 occupations, 18 of them require academic training of either certification, associate degrees or bachelor degrees.

Fastest Growing Occupations
Wisconsin 1986 to 2000
Occupations with 500 + Employment

Occupation Title	Estimated Employment		Percentage Change
	1986	2000	
Medical Records Technicians and Technologists	1,171	1,971	68%
Computer Systems Analysts, EDP*	5,116	8,315	63%
Paralegal Personnel	795	1,288	62%
Physical Therapists	1,288	2,026	57%
Data Processing Equipment Repairers	682	1,047	54%
Electrical and Electronic Engineers	3,196	4,862	52%
Occupational Therapists	866	1,313	52%
Surgical Technicians	871	1,297	49%
Electrical and Electronic Technicians	3,854	5,660	47%
Industrial Engineers, Excluding Safety	2,109	3,052	45%
Physical Corrective Therapy Assistants	714	1,031	44%
Registered Nurses	31,200	44,515	43%
Offset Lithographic Press Setters	1,962	2,791	42%
Mechanical Engineers	4,651	6,605	42%
Peripheral EDP* Equipment Operators	653	911	40%
Medical Assistants	2,302	3,207	39%
Respiratory Therapists	962	1,333	39%
Dental Hygienists	2,018	2,790	38%
Employment Interviewers	3,546	4,864	37%
Directors, Religious Activities/Education	1,268	1,734	37%

* Electronic Data Processing

Source: DILHR, Labor Market Information Bureau, Occupational Projections to 2000, 1989

Profile 5.3 Fastest Declining Occupations

- √ These occupations are expected to have fewer employees in the year 2000.
- √ These occupations will be impacted by a variety of economic factors such as conversion of manual operated industrial equipment to computerized equipment, agricultural declines, technological advances in electronics, over seas trading.

Fastest Declining Occupations
Wisconsin 1986 to 2000
Occupations with 500 + Employment

Occupation Title	Estimated Employment		Percentage Change
	1986	2000	
Electrical, Electronic Assemblers	8,720	4,700	-46.2%
Shoe Sewing Machine Operators	500	330	-33.3%
Industrial Truck and Tractor Operators	11,390	7,860	-31.0%
Stenographers	2,520	1,810	-28.1%
Painters, Transportation Equipment	520	390	-25.2%
Data Entry Keyers, Excluding Composing	7,110	5,460	-23.2%
Statistical Clerks	750	580	-22.0%
Shipfitters	620	500	-19.5%
Shoe and Leather Workers	870	730	-16.2%
Payroll and Timekeeping Clerks	4,030	3,430	-14.8%
Textile Machine Operators	750	640	-14.1%
Optometrists	900	790	-13.2%
Precision Compositors, Typesetter	510	440	-12.9%
Meter Readers, Utilities	980	870	-10.6%
Farm Equipment Mechanics	3,190	2,910	-8.8%
Insurance Policy Processing Clerks	3,260	3,010	-7.7%
Farm and Home Management Advisors	660	610	-7.6%
Telephone and Cable TV Installers/Repairers	2,180	2,030	-7.1%
Sewing Machine Operators, Garment	3,270	3,060	-6.5%
Furnace Operators and Tenders	770	720	-6.1%

Source: DILHR, Labor Market Information Bureau, Occupational Projections to 2000, 1989

Profile 5.4 Greatest Numerical Growth

- √ Eight service industry occupations require minimal training.
- √ Ten occupations require some degree of post-secondary education as preparation for employment.
- √ Seventeen occupations are from the expanding service industry.

Occupations Adding the Most Workers in the Year 2000
Wisconsin 1986 to 2000

Occupation Title	Estimated Employment		Numeric Change
	1986	2000	
Salespersons, Retail	67,260	86,350	19,090
Registered Nurses	31,200	44,520	13,315
Waiters and Waitresses	45,300	55,290	9,996
General Managers and Top Executives	46,450	56,020	9,570
Janitors and Cleaners, Excluding Maids	44,340	53,810	9,468
General Secretaries	49,980	59,070	9,090
Cashiers	39,700	48,640	8,942
Nursing Aides and Orderlies	35,040	42,960	7,922
General Office Clerks	44,760	52,060	7,303
Bartenders	30,610	37,200	6,589
Hairdressers and Cosmetologists	19,210	25,130	5,923
Sales Representatives, Excluding Scientific and Retail	31,370	36,920	5,545
Teachers, Secondary School	30,240	35,370	5,126
Accountants and Auditors	15,060	19,940	4,877
Teachers, Elementary	27,630	31,850	4,229
Maintenance Repairers, General Utilities	19,530	23,610	4,080
Food Preparation Workers	20,340	24,110	3,770
Licensed Practical Nurses	12,010	15,750	3,747
Gardeners and Groundskeepers	10,120	13,790	3,661
Stock Clerks, Sales Floor	21,700	25,060	3,367

Source: DILHR, Labor Market Information Bureau, Occupational Projections to 2000, 1989

Profile 5.5 Most Annual Job Openings

- √ Replacement hires will create greater employment opportunities in 18 out of the 20 occupations.
- √ Jobs with the most annual openings are not expected to be in the hi-tech occupations.
- √ Three-fourths of the occupations with the most projected annual openings are occupations that do not require extensive post high school training.

Occupations With the Most Job Openings
Wisconsin 1986 to 2000

Occupation Title	Annual Job Growth	Labor Force Separations *	Total Annual Job Openings
Salespersons, Retail	1,364	3,802	5,166
Janitors and Cleaners, Excluding Maids	676	3,534	4,210
General Managers and Top Executives	684	2,116	2,800
General Office Clerks	522	1,830	2,352
General Secretaries	649	1,510	2,159
Bartenders	471	1,414	1,885
Registered Nurses	951	905	1,856
Nursing Aides and Orderlies	566	1,287	1,853
Sales Representatives, Excluding Scientific and Retail	396	1,383	1,779
Bookkeeping and Accounting Clerks	5	1,733	1,738
Cashiers	639	1,029	1,668
Stock Clerks, Sales Floor	241	1,120	1,361
Waiters and Waitresses	714	644	1,358
Maids and Housekeeping Cleaners	238	987	1,225
Food Preparation Workers	269	936	1,205
Gardeners and Groundskeepers	262	799	1,061
Teachers, Elementary	302	758	1,060
Maintenance Repairers, General Utility	291	742	1,033
Guards and Watch Guards	161	867	1,028
Teachers, Secondary School	366	646	1,012

* Persons who die or otherwise leave the labor force, minus the number of people who return to the labor force.

Source: DILHR, Labor Market Information Bureau, Occupational Projections to 2000, 1989

Profile 5.6 Self-Employed in the Year 2000

- √ One definition of a small business is gross yearly income of $300,000 or less.
- √ With labor trends toward contingent workers, consultants and services, a person going into business has a broad range of possibilities.
- √ With the advent of Health Maintenance Organizations (HMOs), along with high malpractice insurance rates, doctors and dentists can no longer afford to be self employed.
- √ The small, multiple-service auto mechanic may be a job of the past. Today's mechanic needs up-to-date computerized diagnostic equipment. The field is trending toward specialization.
- √ Retail sales persons and first line supervisors, sales are two occupations common in the home demonstration business. Today toys, cosmetics, crafts, kitchen supplies, cleaning supplies, clothes, home decorations, jewelry, and food items can be purchased through home demonstration plans.

Occupations with the Greatest Self-Employed in the Year 2000
Wisconsin 1986 to 2000
Occupations with 500 + Employment

Occupation Title	Self-Employment		Percentage Change
	1986	2000	
Hairdressers and Cosmetologists	8,747	11,308	29.3%
Sales Representatives, Excluding Scientific and Retail	8,073	9,675	19.8%
Child Care Workers	7,025	8,198	16.7%
Carpenters	6,411	6,898	7.6%
First Line Supervisors, Sales	3,868	4,674	20.8%
Instructors, Nonvocational Education	3,828	4,575	19.5%
Salespersons, Retail	3,046	4,270	40.2%
Barbers	2,724	3,840	41.0%
Painters and Paperhangers	3,105	3,474	11.9%
Food Service and Lodging Managers	3,624	3,296	-9.1%
Automotive Mechanics	3,630	3,203	-11.8%
Gardeners and Groundskeepers	1,716	2,779	61.9%
Industrial Production Managers	2,466	2,665	8.1%
Sales Representatives, Scientific, Production	2,207	2,642	19.7%
Bookkeeping and Accounting Clerks	2,643	2,534	-4.1%
Insurance Sales Workers	2,010	2,456	22.2%
Salespersons, Parts	1,850	2,299	24.3%
Artists and Related Workers	1,875	2,271	21.1%
Janitors and Cleaners, Excluding Maids	1,808	2,158	19.4%
Lawyers	2,683	1,955	-27.1%
Bartenders	1,778	1,872	5.3%
Engineers, Math, Natural Science	1,506	1,662	10.4%

Occupations with the Greatest Self-Employed in the Year 2000
Wisconsin 1986 to 2000
Occupations with 500 + Employment

Occupation Title	Self-Employment		Percentage Change
	1986	2000	
Physicians and Surgeons	2,302	1,607	-30.2%
Designers, Excluding Interior Design	1,307	1,588	21.5%
Automotive Body-Related Repairers	1,393	1,553	11.5%
Accountants and Auditors	1,433	1,548	8.0%
Writers and Editors	1,083	1,392	28.5%
Administrative Services Managers	1,127	1,345	19.3%
Dentists	1,515	1,327	-12.4%
Communication, Transportation, Utility, Managers	1,136	1,244	9.5%
Photographers	986	1,236	25.4%
Medicine and Health Service Managers	952	1,225	28.7%
Cooks, Restaurant	908	1,206	32.8%
Construction Managers	1,128	1,197	6.1%
First Line Supervisors, Production	1,110	1,150	3.6%
Plumbers, Pipefitters, Steamfitters	986	1,140	15.6%
Custom Tailors and Sewers	1,033	1,122	8.6%
Psychologists	941	1,103	17.2%
Musicians, Instrumental	756	1,042	37.8%
Maintenance Repairers, General Utility	789	954	20.9%

Source: DILHR, Labor Market Information Bureau, Occupational Projections to 2000, 1989

6 Income

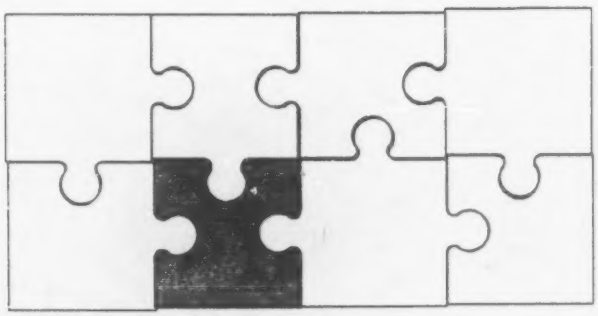
Profiles –

6.1 Personal Income

6.2 Earnings Income

6.3 Wage Information
by Major Industry Division

6.4 Wage Information
by Major Occupational Division



Profile 6.1 Personal Income

- √ Total personal income in Wisconsin increased by 34.6 percent from 1982-1987, or from $52,562,268 to $70,766,606.
- √ Per capita personal income increased from $11,074 in 1982 to $14,723 in 1987, an increase of 33.0 percent.
- √ The population increased 1.3 percent during the same time period.

Wisconsin Personal Income (thousands)

Income Source	1982	1983	1984	1985	1986	1987
Total Personal Income	52,562,268	55,035,420	59,900,493	62,899,876	66,537,277	70,766,606
Nonfarm Personal Income	51,112,159	54,212,229	58,563,783	61,605,916	64,886,716	68,910,170
Farm Income	1,450,109	823,191	1,336,710	1,293,960	1,650,561	1,856,436
Population (Thousands)	4,746.6	4,748.6	4,763.6	4,775.8	4,782.6	4,806.6
Per Capita Personal Income (Dollars)	$11,074	$11,590	$12,575	$13,170	$13,913	$14,723
Derivation of Total Personal Income						
Total Earnings by Place of Work	36,901,415	38,099,113	42,050,471	43,997,385	46,817,548	50,109,547
Less: Personal Contributions for Social Insurance	2,273,873	2,292,869	2,515,971	2,769,117	2,985,195	3,188,954
Plus: Adjustment for Residence	574,771	633,777	738,330	815,166	945,220	972,907
Equals: Net Earnings by Place of Residence	35,202,313	36,440,021	40,272,830	42,043,434	44,777,573	47,893,500
Plus: Dividends, Interest and Rent	8,856,709	9,482,949	10,416,972	11,012,076	11,453,803	12,147,364
Plus: Transfer Payments	8,503,246	9,112,450	9,210,691	9,844,366	10,305,901	10,725,742
Equals: Total Personal Income	52,562,268	55,035,420	59,900,493	62,899,876	66,537,277	70,766,606

Source: U.S. Department of Commerce, Bureau of Economic Analysis

Profile 6.2 Earnings Income

- √ Manufacturing was still the largest income-generating industry in 1987, producing $15,013,702 in earnings.
- √ Farm earnings increased its personal income total by 28.0 percent, from $1,450,109 to $1,856,436.

Earnings by Place of Work (thousands)

Income Source	1982	1983	1984	1985	1986	1987
Earnings by Place of Work	36,901,415	38,099,113	42,050,471	43,997,385	46,817,548	50,109,547
Wages and Salary	29,840,697	31,043,230	33,874,958	35,590,521	37,535,102	40,089,365
Other Labor Income	3,189,940	3,364,858	3,540,215	3,553,394	3,706,369	3,925,287
Proprietors' Income	3,870,778	3,691,025	4,635,298	4,853,470	5,576,077	6,094,895
Farm	1,138,688	522,210	1,041,122	1,001,574	1,362,990	1,555,226
Nonfarm	2,732,078	3,168,815	3,594,176	3,851,896	4,213,087	4,539,669

Earnings by Industry (thousands)

	1982	1983	1984	1985	1986	1987
Earnings by Place of Work	36,901,415	38,099,113	42,050,471	43,997,385	46,817,548	50,109,547
Farm	1,450,109	823,191	1,336,710	1,293,960	1,650,561	1,856,436
Nonfarm	35,451,306	37,275,922	40,713,761	42,703,425	45,166,987	48,253,111
Private	30,150,632	31,691,246	34,752,435	36,350,962	38,447,079	41,218,391
Agricultural Services, Forestry, Fishing, Others	161,328	216,648	224,801	213,498	206,982	230,101
Mining	129,076	117,104	123,066	155,219	70,442	91,324
Construction	1,757,871	1,857,538	2,109,461	2,197,638	2,498,351	2,751,219
Manufacturing	11,838,028	12,121,842	13,481,241	13,770,678	14,213,047	15,013,702
Nondurable Goods	4,228,468	4,479,041	4,785,362	4,984,472	5,275,555	5,613,818
Durable Goods	7,609,560	7,642,801	8,695,879	8,786,206	8,937,492	9,399,884
Transportation and Public Utilities	2,410,682	2,481,503	2,701,595	2,764,068	2,921,727	3,011,900
Wholesale Trade	2,191,846	2,211,828	2,415,495	2,526,434	2,618,994	2,828,237
Retail Trade	3,452,818	3,727,478	3,892,283	4,094,513	4,332,009	4,579,822
Finance, Insurance and Real Estate	1,750,376	1,972,825	2,092,761	2,229,774	2,443,919	2,667,149
Services	6,458,607	6,984,480	7,711,732	8,399,140	9,141,608	10,044,937
Government	5,300,674	5,584,676	5,961,326	6,352,463	6,719,908	7,034,720
Federal, Civilian	618,210	643,541	680,974	722,707	725,746	776,378
Military	110,638	138,978	171,348	194,051	208,872	239,862
State and Local	4,571,826	4,802,157	5,109,004	5,435,705	5,785,290	6,018,480

Source: U. S. Department of Commerce, Bureau of Economic Analysis

Profile 6.3 Wage Information by Major Industry Division

- √ In 1987, retail trade workers earned $9,243, the lowest annual average wage paid by industry in Wisconsin.
- √ The highest annual average wage paid per employee was in the mining industry in 1987 at $25,499.
- √ The finance, insurance and real estate industry showed the largest gain from 1982-1987, increasing by 35.5 percent or $5,525.
- √ Some of the industries with low paid workers were in the service and trade industries--general merchandise, food stores, apparel and accessory stores, hotels, personal services, amusement and other services, and nonprofit organizations.

Wage Information by Major Industry Division

Industry Division	Annual Average Wage per Employee		Change from 1982 to 1987	
	1982	1987	Total	Percent
Agriculture, Forestry and Fishing	$12,594	$15,010	2,416	19.2%
Mining	$21,135	$25,499	4,364	20.7%
Construction	$20,103	$23,303	3,200	15.9%
Manufacturing	$20,590	$24,907	4,317	21.0%
Transportation and Publi Utilities	$20,558	$23,842	3,284	16.0%
Wholesale Trade	$19,130	$23,125	3,995	20.9%
Retail Trade	$7,999	$9,243	1,244	15.6%
Finance, Insurance and Real Estate	$15,550	$21,075	5,525	35.5%
Services	$13,713	$17,230	3,517	25.7%
Public Administration	$16,147	$19,174	3,027	18.8%
Unknown Industry Division	No Data	$14,324	14,324	*
Totals	$15,674	$18,891	3,217	20.5%

* Percent calculation cannot be made on zero earnings in 1982

Source: DILHR, Labor Market Information Bureau, unpublished data from Covered Employment and Wages series

Profile 6.4 Wage Information by Major Occupational Division

- √ The lowest paid group of workers in Wisconsin was in the service occupations, earning a mean wage of $6.50 per hour.
- √ Executive, administrative and managerial workers earned the highest mean wage in 1988 of $15.27 per hour. In this group there were 4,913 workers earning $20-25 per hour.
- √ The lowest weighted starting mean wage (see Glossary) of $5.09 was in sales occupations.
- √ In the occupational groupings of sales and farming, forestry and fishing the median wage was lower than the weighted starting mean wage.

1988 Wage Data

Occupation Title	Wages			Number of Workers Reported by Hourly Wage							
	Mean	Median	Weighted Starting Mean	2.85 to 4.99	5.00 to 6.99	7.00 to 9.99	10.00 to 13.99	14.00 to 15.99	16.00 to 17.99	18.00 to 19.99	20.00 or more
Executive, Administrative and Managerial	$15.27	$12.98	$11.33	553	1,555	4,884	7,091	2,595	1,939	1,543	4,913
Professional	12.98	12.31	10.52	873	1,301	2,962	11,556	3,039	1,611	948	1,767
Technical	9.73	9.26	7.97	486	2,022	7,009	4,424	1,069	259	164	111
Sales Occupations	6.82	4.75	5.09	9,226	3,428	1,917	1,268	800	328	469	382
Administrative Support (Including Clerical)	7.34	7.02	6.12	6,704	20,436	22,393	5,785	448	146	57	56
Service Occupations	6.50	5.67	5.51	20,861	18,342	11,445	6,598	1,510	363	122	46
Farming, Forestry and Fishing	7.12	6.00	6.36	1,008	354	446	670	32	0	0	0
Mechanics and Repairers	9.86	9.73	7.98	633	1,957	4,439	4,683	1,049	368	35	74
Construction	12.61	12.92	9.69	95	231	650	1,282	658	590	211	39
Precision Production	9.81	9.55	7.40	585	1,725	3,488	3,549	627	464	187	53
Production Working Occupations	8.60	8.00	6.69	4,725	9,720	13,124	9,512	1,650	732	229	222
Transportation and Material Moving	9.04	9.00	7.74	861	3,180	5,167	4,994	402	158	26	27
Handlers, Equipment Cleaners and Laborers	7.16	6.92	5.84	3,787	4,237	5,224	2,158	227	34	2	4

Source: DILHR, Labor Market Information Bureau, 1988 Wage Survey

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7 Education

Profiles –

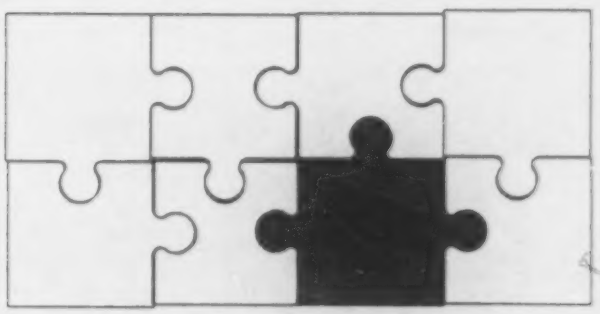
7.1 Public High School Graduates and Dropouts

7.2 Public High School Graduates Intending to Enter College

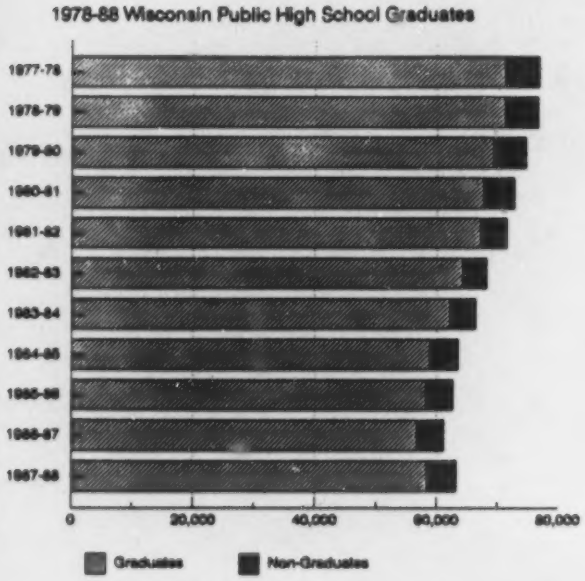
7.3 Degrees Conferred by Wisconsin Institutions of Higher Education

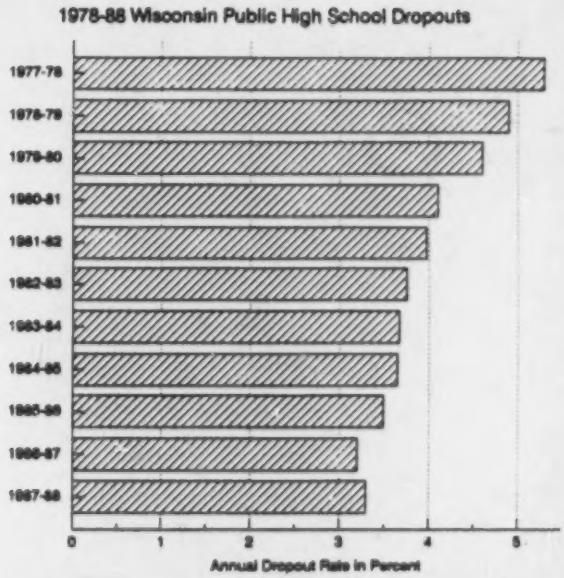
7.4 Educational Attainment

7.5 Apprenticeship



Profile 7.1 1978 - 1988 Public High School Graduates and Dropouts





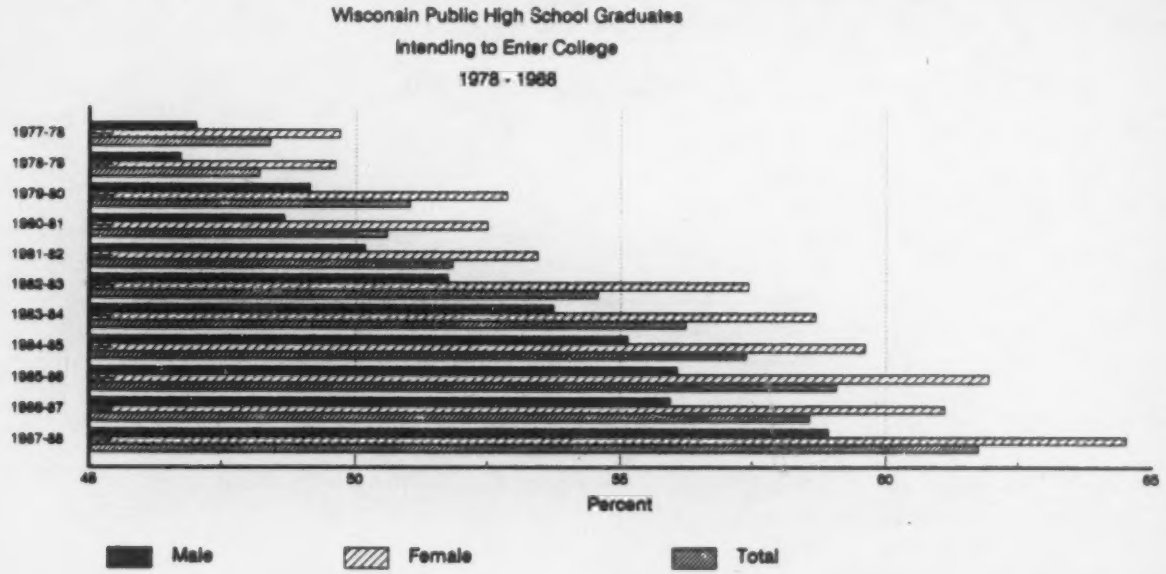
- √ From school years 1977 through 1987, the twelfth grade enrollments and graduates decrease then rebounds in 1987-88.
- √ The percent of graduates remained constant throughout 1978-1988, as compared to the actual enrollment figures for the same time period.
- √ The data suggests that the public school system has adjusted to the population changes over the last ten years.
- √ The data also suggests that there may be a core of students who need special attention if Wisconsin is to graduate better than ninety percent of the twelfth grade enrollees.
- √ If a student makes it to the twelfth grade, they are ninety percent likely to graduate.
- √ From the year 1977-78 to 1987-88, the number of dropouts and the percentage of dropouts have steadily decreased.
- √ The number of dropouts from the ninth through twelfth grade has decreased by more than half from a high of over 17,000 to just over 8,000. This represents a two percent decrease in the dropout rate.

1978-88 Wisconsin Public High School Graduates and Dropouts

School Year	12th Grade			9-12 Grade		
	Enrollees	Graduates	Graduate Rate	Enrollees	Dropouts	Dropout Rate
1977-78	76,925	71,295	92.7%	324,943	17,222	5.3%
1978-79	76,654	71,291	93.0%	325,472	15,751	4.9%
1979-80	74,781	69,332	92.7%	312,936	14,404	4.6%
1980-81	72,758	67,743	93.1%	300,948	12,208	4.1%
1981-82	71,632	67,357	94.0%	290,102	11,508	4.0%
1982-83	68,240	64,321	94.3%	279,999	10,501	3.8%
1983-84	66,424	62,189	93.6%	273,327	10,029	3.7%
1984-85	63,524	58,851	92.6%	269,883	9,849	3.7%
1985-86	62,661	58,340	93.1%	266,533	9,302	3.5%
1986-87	61,122	56,872	93.0%	259,844	8,315	3.2%
1987-88	63,351	58,428	92.2%	250,909	8,280	3.3%

Source: Wisconsin Department of Public Instruction, Education Statistical Information Center, Information Series

Profile 7.2 1978 - 1988 Public High School Graduates Intending to Enter College



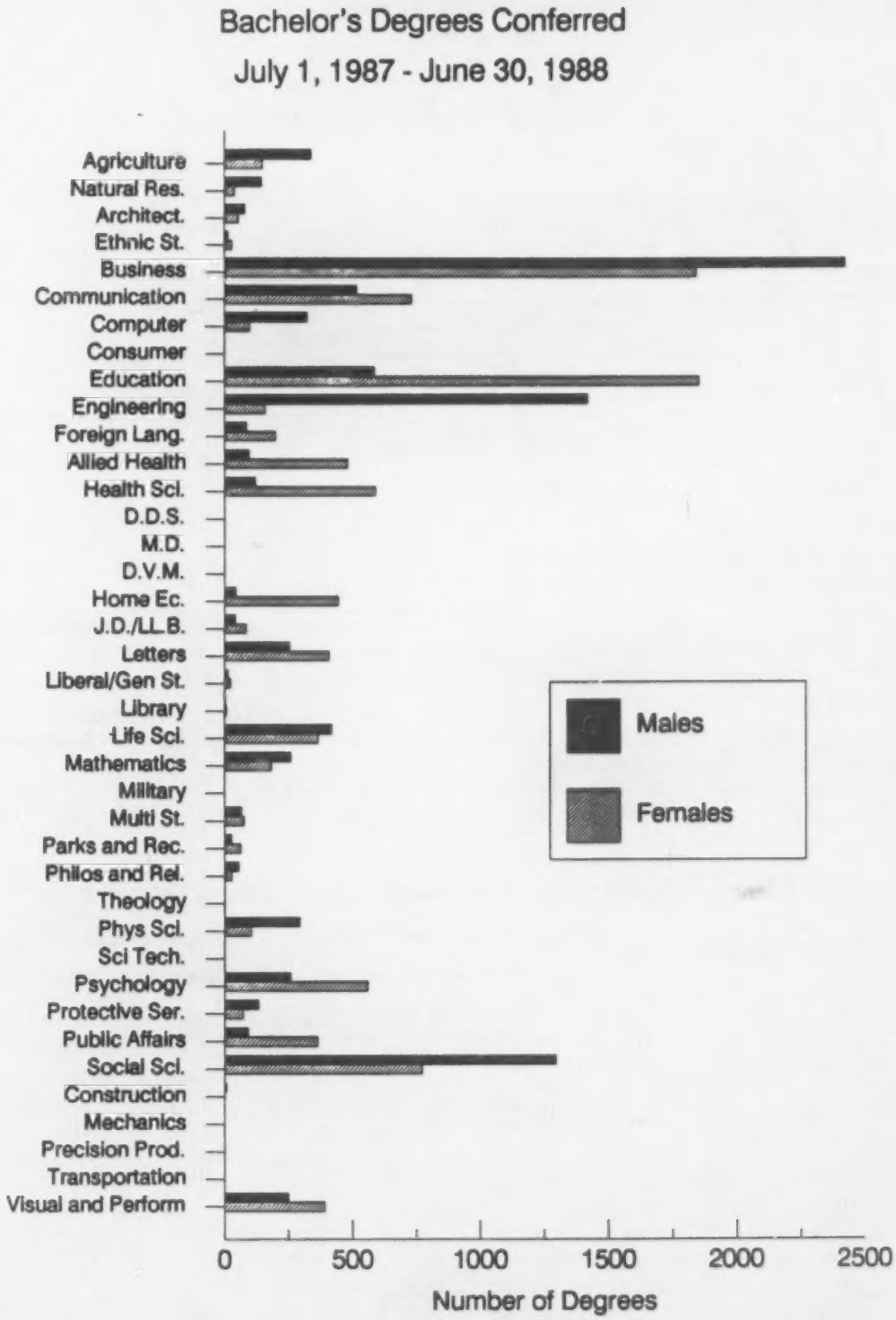
- √ For the purposes of this analysis, college is defined as a two or more year degree granting institution.
- √ Over the ten year period, the number of public high school graduates who report they expect to enter college has steadily risen.
- √ While the number of graduates declined through 1986-87, the percent of students reporting intent to enter college increased dramatically from 48 percent to over 61 percent.
- √ Graduates intending to enter college increased 13.3 percentage points.
- √ Females are more likely to graduate and report intending to enter college at a greater rate than do their male counterparts.
- √ The actual number of students who intend to enter college ranges between 33,000 and 36,000.

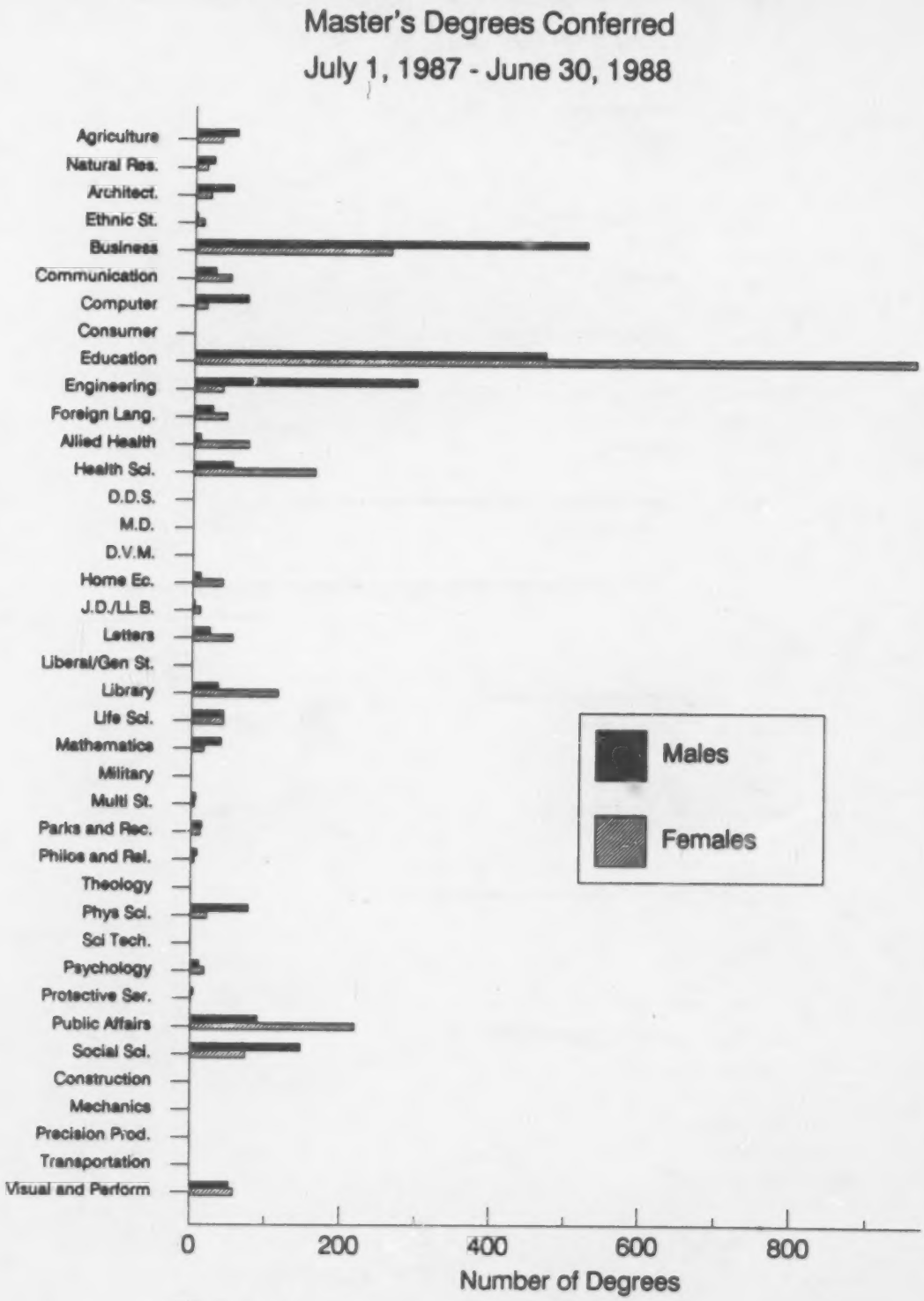
1978-88 Wisconsin Public High School Graduates Intending to Enter College

School Year	12th Grade Graduates			12th Grade Graduates Intending to Enter College					
				Number of Graduates			Percent of Total Graduates		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1977-78	34,795	36,500	71,295	16,354	18,144	34,498	47.0%	49.7%	48.4%
1978-79	34,855	36,436	71,291	16,278	18,076	34,354	46.7%	49.6%	48.2%
1979-80	33,961	35,371	69,332	16,685	18,697	35,382	49.1%	52.9%	51.0%
1980-81	33,618	34,125	67,743	16,361	17,912	34,273	48.7%	52.5%	50.6%
1981-82	33,295	34,062	67,357	16,705	18,203	34,908	50.2%	53.4%	51.8%
1982-83	32,105	32,216	64,321	16,609	18,497	35,106	51.7%	57.4%	54.6%
1983-84	30,924	31,265	62,189	16,617	18,348	34,965	53.7%	58.7%	56.2%
1984-85	29,433	29,418	58,851	16,226	17,536	33,762	55.1%	59.6%	57.4%
1985-86	28,571	29,769	58,340	16,021	18,438	34,459	56.1%	61.9%	59.1%
1986-87	28,047	28,827	56,872	15,687	17,616	33,303	55.9%	61.1%	58.6%
1987-88	29,118	29,310	58,428	17,157	18,913	36,070	58.9%	64.5%	61.7%

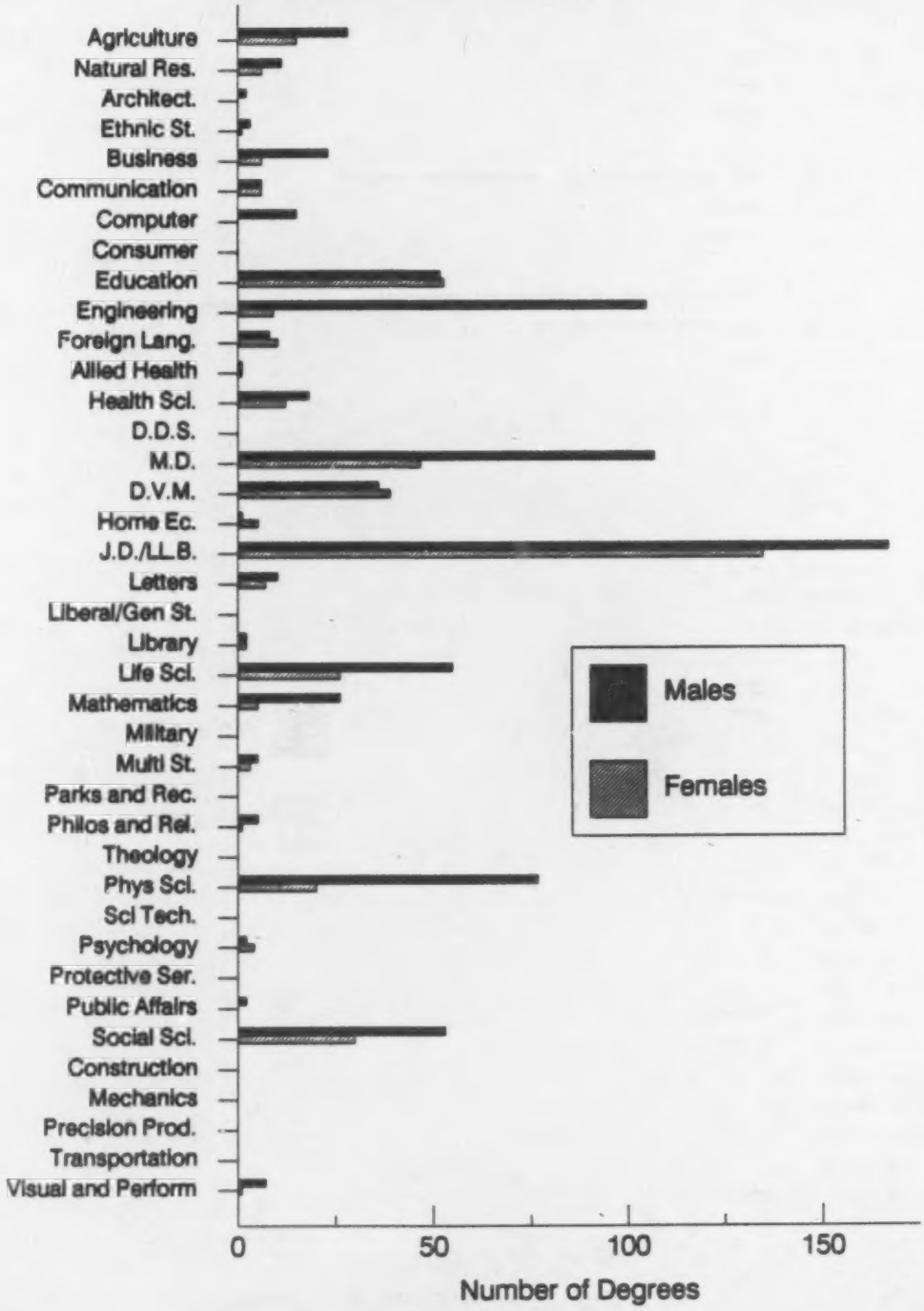
Source: Wisconsin Department of Public Instruction, Education Statistical Information Center, Information Series

Profile 7.3 Degrees Conferred by Wisconsin Institutions of Higher Education




Master's Degrees Conferred
July 1, 1987 - June 30, 1988
Agriculture
Natural Res.
Architect.
Ethnic St.
Business
Communication
Computer
Consumer
Education
Engineering
Foreign Lang.
Allied Health
Health Sci.
D.D.S.
M.D.
D.V.M.
Home Ec.
J.D./LL.B.
Letters
Liberal/Gen St.
Library
Life Sci.
Mathematics
Military
Multi St.
Parks and Rec.
Philos and Rel.
Theology
Phys Sci.
Sci Tech.
Psychology
Protective Ser.
Public Affairs
Social Sci.
Construction
Mechanics
Precision Prod.
Transportation
Visual and Perform
Males
Females
0
200
400
600
800
Number of Degrees

Doctor's and Professional Degrees Conferred
July 1, 1987 - June 30, 1988



Degrees Conferred by Wisconsin Institutions of Higher Education

Program or Field of Study	Bachelor's Degrees	
	Women	Men
Agribusiness, Agricultural Production, Agricultural Sciences	149	338
Renewable Natural Resources	39	145
Architecture and Environmental Design	56	78
Area and Ethnic Studies	29	14
Business and Management, Business and Office, Marketing and Distribution	1,845	2,423
Communications and Communications Technology	730	517
Computer and Information Sciences	97	322
Consumer, Personal and Miscellaneous Services		No Data
Education	1,851	586
Engineering and Engineering-Related Technologies	158	1,417
Foreign Languages	197	85
Allied Health	479	94
Health Sciences	590	121
Dentistry (D.D.S.)		No Data
Medicine (M.D.)		No Data
Veterinary Medicine (D.V.M.)		No Data
Home Economics and Vocational Home Economics	442	44
Law and J.D.(Doctor of Laws)/LL.B.(Bachelor of Laws)	82	42
Letters	407	252
Liberal/General Studies	21	11
Library and Archival Science	5	1
Life Sciences	363	417
Mathematics	181	257
Military Sciences and Technologies		No Data
Multi/Interdisciplinary Studies	75	64
Parks and Recreation	62	28
Philosophy and Religion	28	56
Theology		No Data
Physical Sciences	103	293
Science Technologies		No Data
Psychology	558	257
Protective Services	71	133
Public Affairs	362	91
Social Sciences	769	1,293
Construction Trades	0	6
Mechanics and Repairers		No Data
Precision Production		No Data
Transportation and Material Moving		No Data
Visual and Performing Arts	389	249
Total Degrees Conferred	10,138	9,634

Source: Wisconsin Association of Collegiate Registrars and Admissions Officers

Degrees Conferred by Wisconsin Institutions of Higher Education

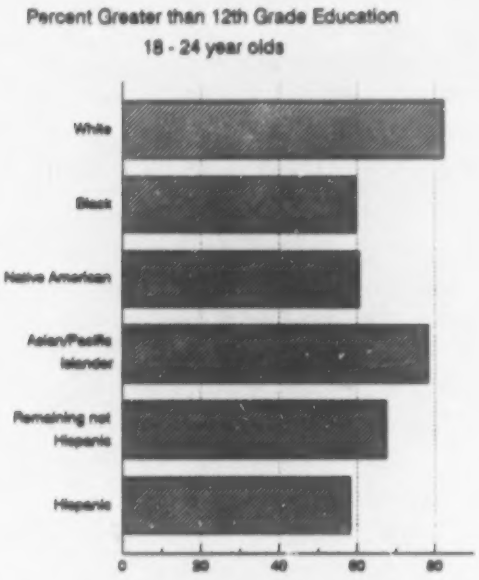
Program or Field of Study	Degrees					
	Master		Doctorate		Professional	
	Women	Men	Women	Men	Women	Men
Agribusiness, Agricultural Production, Agricultural Sciences	35	55	15	28		
Renewable Natural Resources	15	25	6	11		
Architecture and Environmental Design	21	50	0	2		
Area and Ethnic Studies	11	3	1	3		
Business and Management, Business and Office, Marketing and Distribution	262	523	6	23		
Communications and Communications Technology	48	28	6	6		
Computer and Information Sciences	16	71	0	15		
Consumer, Personal and Miscellaneous Services	No Data					
Education	963	469	53	52		
Engineering and Engineering-Related Technologies	38	297	9	105		
Foreign Languages	44	25	10	8		
Allied Health	73	9	1	1		
Health Sciences	162	52	12	18		
Dentistry (D.D.S.)	No Data					
Medicine (M.D.)					47	107
Veterinary Medicine (D.V.M.)					39	36
Home Economics and Vocational Home Economics	40	10	5	1		
Law and J.D.(Doctor of Laws)/LL.B.(Bachelor of Laws)	10	3			135	167
Letters	53	23	7	10		
Liberal/General Studies	No Data					
Library and Archival Science	114	34	2	2		
Life Sciences	42	42	26	55		
Mathematics	16	39	5	26		
Military Sciences and Technologies	No Data					
Multi/Interdisciplinary Studies	4	6	3	5		
Parks and Recreation	12	14				
Philosophy and Religion	4	8	1	5		
Theology	No Data					
Physical Sciences	22	76	20	77		
Science Technologies	No Data					
Psychology	18	11	4	2		
Protective Services	1	4				
Public Affairs	219	89	0	2		
Social Sciences	73	147	30	53		
Construction Trades	No Data					
Mechanics and Repairers	No Data					
Precision Production	No Data					
Transportation and Material Moving	No Data					
Visual and Performing Arts	58	52	1	7		
Total Degrees Conferred	2,374	2,165	223	517	221	310

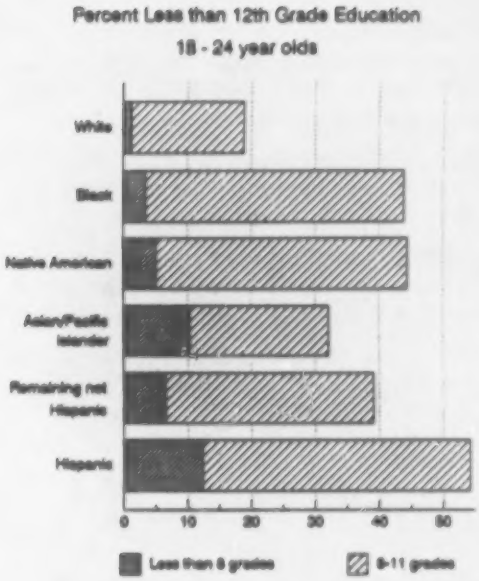
Source: Wisconsin Association of Collegiate Registrars and Admissions Officers

Profile 7.3 Degrees Conferred by Wisconsin Institutions of Higher Education (continued)

- √ Institutions of higher education are defined as the University of Wisconsin - System; the Vocational, Technical and Adult Education Colleges; and independent institutions.
- √ For specific breakouts of degrees conferred requiring less than four years of education, please consult the orignal source.
- √ More women than men graduated with degrees in less than four years, bachelor's degrees and master's degrees.
- √ Twice as many doctoral degrees were conferred to men than to women.
- √ With very few exceptions, males earned more professional and doctoral degrees than females in each field of study.
- √ Within the field of study, sex role stereotyping is evident. Women were over represented in fields such as education, foreign languages, allied health, home economics, library sciences, psychology, and public affairs.
- √ Women earn one tenth the number of engineering degrees than do men at every level. This difference is striking.

Profile 7.4 Educational Attainment





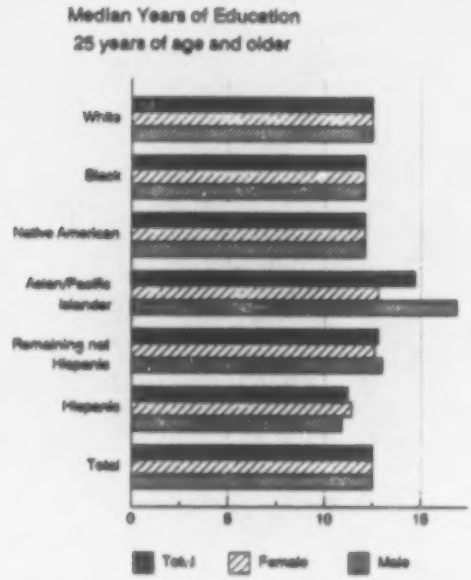
- √ In all cases, the educational attainment of persons 18-24 years of age is greater than that of persons 25 years of age and older.
- √ Asian/Pacific Islanders have the highest educational attainment in the 25 and older group with an average of 14.7 years of education. They are second to the white non-Hispanic in the 18-24 years of age for percentage of educational attainment. The differences between males and females for this group is also striking. Females have less education than their Asian male counterparts, and are near the average for all races.
- √ Hispanics have the highest percent of people with less than 12 years of education. As a group they also have the lowest median years of education at 11.2 years.
- √ The median years of education for all groups is slightly over 12, with less than a third of the population having less than 12 years of education.

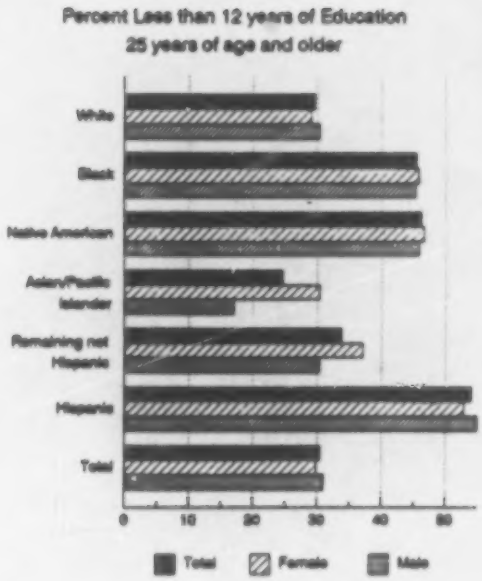
Educational Attainment of Persons 18 - 24 years old

Race or Ethnic Group	Total Population	Years of Education		
		8 or less	9 - 11	12 or more
White not Hispanic	595,016	1.2%	17.7%	82.3%
Black not Hispanic	27,751	35.0%	40.4%	59.6%
Native American	4,437	5.1%	39.4%	60.6%
Asian/Pacific Islander	2,965	10.4%	21.7%	78.3%
Remaining not Hispanic	317	6.6%	32.5%	67.5%
Hispanic all Races	10,456	12.4%	41.9%	58.1%
Total	640,942			

Source: U.S. Bureau of Census, 1980 Census of Population Report 3: Social Indicators for Planning and Evaluation

Profile 7.4 Educational Attainment (continued)



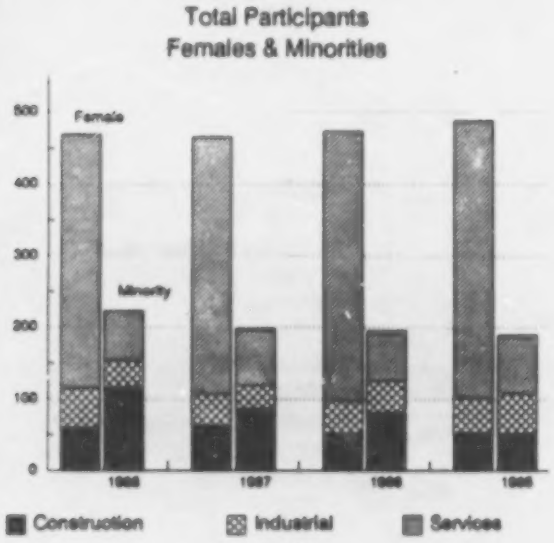


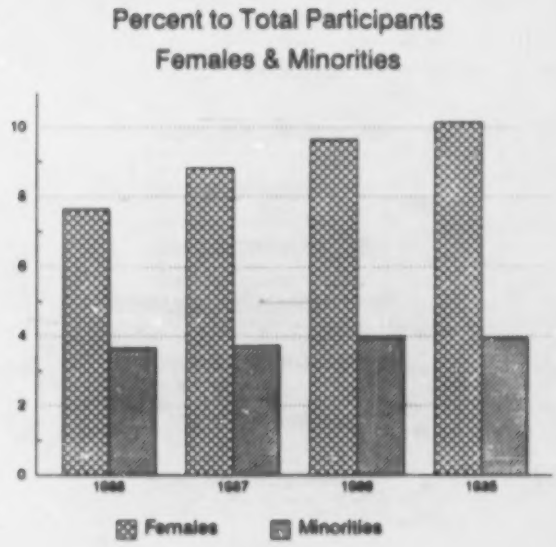
Educational Attainment of Persons 25 years old and older

Race or Ethnic Group	Gender	Total Population	Years of Education					
			8 or less	9 - 11	12	13 - 16	16 +	Median
White not Hispanic	Male	1,230,480	18.4%	11.9%	37.7%	23.2%	8.8%	12.5
	Female	1,348,069	17.1%	12.0%	44.0%	22.8%	4.2%	12.5
	Total	2,578,549	17.7%	12.0%	41.0%	23.0%	6.4%	12.5
Black not Hispanic	Male	35,511	22.5%	22.8%	30.4%	19.9%	4.5%	12.1
	Female	42,541	18.3%	27.5%	32.3%	18.5%	3.4%	12.1
	Total	78,052	20.2%	25.4%	31.4%	19.1%	3.9%	12.1
Native American not Hispanic	Male	5,977	22.7%	23.2%	35.3%	16.1%	2.8%	12.1
	Female	6,798	20.3%	26.2%	35.1%	16.9%	1.4%	12.1
	Total	12,775	21.4%	24.8%	35.2%	16.5%	2.1%	12.1
Asian/Pacific Islander not Hispanic	Male	4,782	11.9%	5.1%	11.3%	24.9%	46.7%	16.9
	Female	6,266	21.0%	9.3%	23.8%	27.3%	18.6%	12.8
	Total	11,048	17.1%	7.5%	18.4%	26.3%	30.8%	14.7
Remaining not Hispanic	Male	386	19.7%	10.6%	20.5%	35.5%	13.7%	13.0
	Female	415	19.5%	17.6%	21.0%	32.8%	9.2%	12.6
	Total	801	19.6%	14.2%	20.7%	34.1%	11.4%	12.8
Hispanic all Races	Male	12,508	39.6%	15.7%	21.6%	16.5%	6.5%	10.9
	Female	11,655	36.0%	16.8%	26.8%	16.1%	4.3%	11.4
	Total	24,163	37.9%	16.2%	24.1%	16.3%	5.4%	11.2
Total	Male	1,289,644	18.7%	12.3%	37.2%	23.0%	8.8%	12.5
	Female	1,415,744	17.3%	12.5%	43.3%	22.6%	4.2%	12.5
	Total	2,705,388	18.0%	12.4%	40.4%	22.8%	6.4%	12.5

Source: U.S. Census Bureau, 1980 Census of Population Report 3: Social Indicators for Planning and Evaluation

Profile 7.5 Apprenticeship





- √ From 1985 through 1988 the percent of minorities in apprenticeships remained relatively constant.
- √ The percent of females decreased by over 2 percentage points.
- √ Minorities have almost doubled their representation in the construction trades from 1985 to 1988.
- √ Within the three industries, females and minorities are concentrated in the services area.
- √ Within the services industry, females are greatly represented in barbering and cosmotology occupations.

Apprenticeship Statistics

Date	Industry	Number of Enrollees			Percent to Total Enrollees	
		Total	Females	Minorities	Females	Minorities
December 1988	Construction	3,222	61	116	1.9%	3.6%
	Industrial	1,987	55	38	2.8%	1.9%
	Services	920	353	69	38.4%	7.5%
	Total	6,129	469	223	7.7%	3.6%
December 1987	Construction	2,542	63	87	2.5%	3.4%
	Industrial	1,868	44	31	2.4%	1.7%
	Services	877	359	79	40.9%	9.0%
	Total	5,287	466	197	8.8%	3.7%
December 1986	Construction	2,192	52	82	2.4%	3.7%
	Industrial	1,868	45	43	2.4%	2.3%
	Services	847	377	70	44.5%	8.3%
	Total	4,907	474	195	9.7%	4.0%
December 1985	Construction	1,971	54	53	2.7%	2.7%
	Industrial	1,935	48	55	2.5%	2.8%
	Services	909	387	82	42.6%	9.0%
	Total	4,815	489	190	10.2%	4.0%

Source: DILHR, Division of Employment and Training Policy, Bureau of Apprenticeship Standards

8 Employment and Training Data

Profiles –

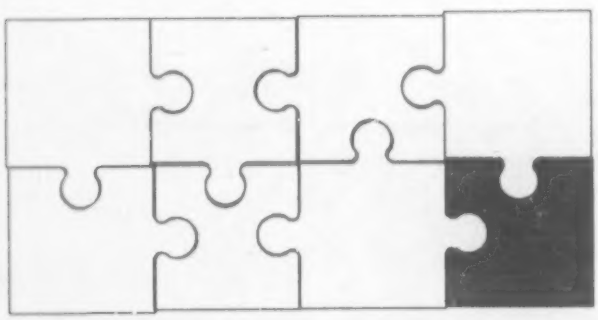
8.1 JTPA Participant Statistics

8.2 JTPA Title II Program Eligibility Projections PY1990 and 1991

8.3 JTPA Title II Program Eligibility Projections PY1989

8.4 Job Service Activity

8.5 Applicants to Job Openings – Job Service



Profile 8.1 JTPA Participant Statistics

- √ The latest Job Training Partnership Act (JTPA) statistics show that the older worker program showed an increase in enrollment from 625 to 782 people from 1984 to 1987.
- √ The Economically Disadvantaged enrollments were 3,650 fewer in 1987 than in 1984. Placements increased by 4,495 during the same time period.
- √ Dislocated worker enrollments and placements declined from 1984 to 1987 with the exception of minorities and handicapped.
- √ From 1984 to 1987, the number of older workers placed increased with the exception of minorities and welfare cases.

JTPA Participant Statistics

Program Year	Total Enrollments	Selected Target Group Placements				
		Females	Dropouts	Minority	Handicapped	Welfare*
Three Percent -- Older Individuals						
1984 Totals	625	119	80	45	34	12
1987 Totals	782	273	128	43	74	8
Title IIA -- Economically Disadvantaged						
1984 Totals	29,228	5,770	2,670	2,463	2,137	3,160
1987 Totals	25,578	6,896	2,532	2,506	2,389	3,672
Title III -- Dislocated Workers						
1984 Totals	6,098	1,220	794	767	170	492
1987 Totals	4,624	814	370	476	170	147

Source: DILHR, Division of Employment and Training Policy, Wisconsin Information Management System, Go1 yearly Reports, FY's 1984 and 1987

NOTE: Selected Target Group Placements do not equal Total Enrollments

* Welfare means AFDC

Profile 8.2 JTPA Title II Program Eligibility Projections PY 1990 and 1991

- √ The number of people eligible for JTPA programs are estimated to be 466,869, with 203,887 being male and 262,982 being female.
- √ Youth represent 107,282, and adults 359,586.
- √ Some specific targeted groups are public assistance recipients, 137,741; displaced homemakers, 37,276; and offenders and ex-offenders, 28,906.

Title II Program Eligibility Projections PY 1990 and 1991

Demography		Number	Percent
Total	Total	466,869	100.0%
	Male	203,887	43.7%
	Female	262,982	56.3%
Youth	Total	107,282	23.0%
	Age 14-15	13,041	2.8%
	Age 16-21	94,241	20.2%
	Male	54,051	11.6%
	Female	53,232	11.4%
Adults	Total	359,586	77.0%
	Age 22-54	330,237	70.7%
	Age 55-69	29,349	6.3%
	Male	149,836	32.1%
	Female	209,750	44.9%
Minority	Total	81,140	17.4%
	Black	52,261	11.2%
	Hispanic	12,540	2.7%
	American Indian, Eskimo	8,482	1.8%
	Asian and Other	7,857	1.7%
White (NonHispanic)		385,728	82.6%
Handicapped		36,917	7.9%
Displaced Homemakers		37,276	8.0%
School Dropouts (16-69)		68,283	14.6%
AFDC-JTPA Eligible		75,903	16.3%
Teenage Parents		12,971	2.8%
Public Assistance Recipients		137,741	29.5%
Offenders and Ex-Offenders		28,906	6.2%
Veterans		53,467	11.5%
Vietnam Era Vets		20,881	4.5%
Refugees		26,452	5.7%

Source: DILHR, Labor Market Information Bureau, estimates

Profile 8.3 JTPA Title III Program Eligibility Projections PY 1989

- √ The estimate of dislocated workers for program year 1990-1991 shows a ratio of two males to one female.
- √ Dislocated workers show 15.9 percent with 0-11 years of education and 84.1 percent with at least a high school education.

Title III Program Eligibility Projections PY 1989

Demography		Number	Percent
Total	Total	97,628	100.0%
	Male	64,816	66.4%
	Female	32,812	33.6%
Minority	Total	6,884	7.1%
	Black	4,891	5.0%
	Hispanic	1,192	1.2%
	American Indian, Eskimo	521	0.5%
	Asian and Other	280	0.3%
White, NonHispanic		90,744	92.9%
0 to 11 years of education		15,560	15.9%
12 and over years of education		82,068	84.1%
Age less than 55		85,223	87.3%
Age 55 years and older		12,405	12.7%
Handicapped		3,832	3.9%

Source: DILHR: Labor Market Information Bureau, estimates

Profile 8.4 Job Service Activity

- √ First Quarter data covers the first three months of a calendar year.
- √ Job Service increased the placement of applicants in jobs from 18,075 in the first quarter of 1988 to 18,628 in the first quarter of 1989.
- √ Although placements increased, applicants also increased from 161,142 in the first quarter of 1988 to 164,546 in the first quarter of 1989.
- √ The number of active openings and new openings declined from the first quarter of 1988 to the first quarter of 1989 from 36,625 to 31,565 and 22,150 to 17,528, respectively.

Job Service Activity
Statewide First Quarter Data

Job Title	Openings				Active Applicants		Placements	
	New Jobs		Active					
	1988	1989	1988	1989	1988	1989	1988	1989
Executive, Administrative and Managerial	470	506	816	808	7,999	8,382	12	65
Professional	659	635	1,234	1,099	6,537	6,267	52	59
Technical	365	414	780	703	2,944	2,750	42	17
Sales Occupations	1,796	1,722	3,265	2,790	12,750	12,840	1,896	1,031
Administrative Support, Including Clerical	2,547	2,820	4,616	4,659	23,263	23,898	699	1,348
Service Occupations	3,106	3,145	9,004	6,387	24,188	26,266	1,879	3,048
Farming, Forestry and Fishing	1,932	723	1,738	1,065	2,286	2,338	239	403
Mechanics and Repairers	920	797	1,508	1,419	7,171	6,618	159	145
Construction	596	641	1,113	1,145	6,389	6,129	318	513
Precision Production	909	562	1,320	1,131	3,988	3,848	412	440
Production Working	4,348	2,869	5,731	5,647	27,281	28,978	7,324	7,315
Transportation and Material Handling	760	733	1,615	1,282	9,268	9,402	814	783
Handlers, Equipment Cleaners and Laborers	3,657	1,915	3,814	3,363	26,760	26,493	4,229	3,367
Unclassified	85	46	71	67	318	337	0	94
Total	22,150	17,528	36,625	31,565	161,142	164,546	18,075	18,628

Source: DILHR, Labor Market Information Bureau, unpublished data from Job Service Information Systems

Profile 8.5 Job Service Applicants to Job Openings

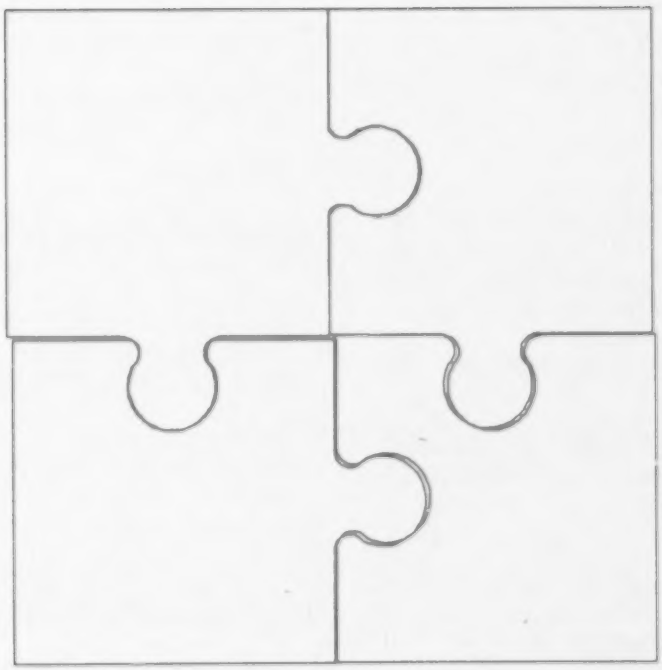
- √ The ratio of applicants to openings was the highest for executive, administrative and managerial positions and lowest for farming, forestry and fishing jobs.
- √ The greatest number of applicants and openings occurred in "production" jobs, 28,978 and 5,647.

Active Applicants to Job Openings Ratio
Statewide First Quarter 1989

Job Title	Applicants	Openings	Ratio
Executive, Administrative and Managerial	8,382	808	10:1
Professional	6,267	1,099	6:1
Technical	2,750	703	4:1
Sales Occupations	12,840	2,790	5:1
Administrative Support, Including Clerical	23,898	4,659	5:1
Service Occupations	26,266	6,387	4:1
Farming, Forestry and Fishing	2,338	1,065	2:1
Mechanics and Repairers	6,618	1,419	5:1
Construction	6,129	1,145	5:1
Precision Production	3,848	1,131	3:1
Production Working	28,978	5,647	5:1
Transportation and Material Handling	9,402	1,282	7:1
Handlers, Equipment Cleaners and Laborers	26,493	3,363	8:1
Unclassified	337	67	5:1
State Summary	164,546	31,565	5:1

Source: DILHR, Labor Market Information Bureau, unpublished data from Job Service Information Systems

Appendix



Appendix A: Glossary

The following terms and concepts are the most common used in the development and analysis of labor market statistics. Most of the definitions have been developed by the U.S. Bureau of Labor Statistics for its data collection programs.

Active Applicants are the number of applications found in the Wisconsin Job Service applicant computer record files. In the Job Service Information System, applicants are generally reflected as "Applicants Available," "New Applicants and Renewals," and "Total Active Applicants."

Active Openings/Openings Received are the number of job openings listed in the Wisconsin Job Service job orders. This number is obtained from job order computer record files. Data for job order files is inputted by Wisconsin Job Service local office staff statewide. The previous Program Year openings are subtracted from the total openings on all orders to reflect openings received during the current Program Year.

Current Population Survey is a national household survey conducted each month by the Bureau of the Census for the Bureau of Labor Statistics. Information is gathered from a sample of 60,000 households (about 900 in Wisconsin) designed to represent the civilian noninstitutional population of persons 16 years old and older.

Covered Employment (State): Employment in any industry insured under the provisions of the Wisconsin Unemployment Compensation Law.

Civilian Labor Force comprises the total of all civilians in the labor force. Members of the Armed Forces are not included.

Discouraged Workers are persons, not included in the unemployment count, who make no active attempt to find a job because they think none is available, or they believe they lack the skills necessary to compete in the labor market. Many discouraged workers are women and teenagers, but the number of male adult discouraged workers typically increases during prolonged periods of high unemployment.

Dislocated Worker (Title III JTPA Program): A person who:

1. has been terminated or laid-off, or who has received a notice of termination or lay-off from employment, is eligible for or has exhausted entitlement to unemployment compensation, and is unlikely to return to a previous industry or occupation;

2. has been terminated, or who has received a notice of termination of employment, as a result of any permanent closure of a plant or facility; or

3. is long-term unemployed and has limited opportunities for employment or reemployment in the same or a similar occupation in the area in which such individual resides and may include older individuals who may have substantial barriers to employment by reason of age.

Dropouts are individuals who have completed less than 12 years of formal education and/or have not obtained a General Equivalency Diploma (GED).

Economically Disadvantaged (Title II): A person who:

1. receives, or is a member of a family who receives cash welfare payments under a Federal, State or local welfare program;

2. has (or is a member of a family which has) received a total family income for the six months prior to application, which in relation to family size, was not in excess of the higher of

a) the poverty level determined in accordance with criteria established by OMB; or

b) 70 percent of the lower living standard income level.

3. is receiving Food Stamps pursuant to the Food Stamp Act of 1977;

4. is a foster child on behalf of whom State or local government payments are made, or

5. In cases permitted by regulations of the Secre-

tary, is an adult handicapped individual whose own income meets the requirements of (1) or (2), but who is a member of a family whose income does not meet such requirements.

Employed persons are:

1. individuals 16 years old and over who worked for pay any time during the week which includes the twelfth day of the month, or who worked unpaid for fifteen hours or more in a family-owned business, and

2. individuals who were temporarily absent from their jobs due to illness, bad weather, vacation, labor dispute or personal reasons.

Excluded from the employed group are persons whose only activity consisted of work around the house (such as own home housework, painting or repairing own homes, or homes of close friends, etc.) and volunteer work for religious, charitable, and similar organizations.

Industry is a generic term for a distinct group of productive or profit-making enterprises. Industries are described and classified by their primary activity or product. The entire body of industries is divided into two sectors: service-producing and goods-producing. The goods-producing industries include industries in agriculture, forestry and fishing, mining, construction, and manufacturing. The service-producing industries include transportation, communications, and public utilities, wholesale trade, retail trade, finance, insurance and real estate, services, and government. These divisions are further divided into industries with a single product or service.

Job Training Partnership Act (JTPA): This is a federally-funded program, begun in 1982, to prepare youth and adults for entry into the labor force through a cooperative effort of local elected officials and Private Industry Councils (PICs).

Labor Force consists of all persons 16 years of age or over within a specific geographic area who are either employed or unemployed and seeking work.

Labor Force Participation Rate: The proportion of the total civilian noninstitutional population or of a demographic subgroup, 16 years old and over, is in the labor force.

Labor Market Information (LMI) is a body of information that deals with the functioning of labor markets and the determination of the demand for and supply of labor. It includes, but is not limited to, such key factors as changes in the level and/or composition of economic activity, the population, employment and unemployment, income and earnings, and wage rates and fringe benefits.

Metropolitan Statistical Area (MSA) is defined by the Office of Management and Budget as a county or group of contiguous counties with a total population of at least 100,000. The area must also contain at least one city with a population of 50,000 or more. Outlying counties are included in an MSA based on their population densities and the volume of commuting to central counties. Wisconsin has 11 MSA's.

Nonfarm Wage and Salary Employment includes all full-time and part-time employees of all classes (including employees on paid vacation or paid sick leave) who work in or receive compensation from nonagricultural establishments for any part of the pay period that includes the 12th of the month. It does not include pensioners, members of the armed forces, self-employed or unpaid family workers, or persons on leave of absence without pay.

Nonmetropolitan Area includes all counties that do not belong to the metropolitan category. There are 53 nonmetropolitan counties in Wisconsin.

Not in the Labor Force includes all persons 16 years old and over who are not employed or unemployed. This group consists mainly of students, persons whose only activity is keeping house, retired workers, seasonal workers during an "off" season who are not looking for work, inmates in institutions, disabled persons, and unpaid persons working less than 15 hours a week in a family business or farm.

Occupation refers to the name or title of a job that identifies the principal business or activity of a person's life.

Older Individual is defined as a dislocated worker who is 55 years of age or older. (Or, anyone 55 years of age or older and economically disadvantaged.)

Per Capita Personal Income is computed by dividing the total personal income by the population estimates provided by the Bureau of Census.

Personal Income is income received by all individuals from all sources, including wage and salary, transfer payments and unearned income.

Standard Industrial Classification (SIC) is a classification scheme which codes industries by their primary activity or product. The classification scheme is described in the *Standard Industrial Classification Manual*. The SIC coding is widely used in government and private industry for reference in research and statistical programs and for code assignment of industries. The most recent edition of the manual is 1987.

Standard Occupational Classification (SOC) is a classification scheme for grouping occupations based on skill level, training, education, licensing and credential requirements. The system is used in social and economic statistical reporting programs, such as the Census or Bureau of Labor Statistics programs. The classification scheme is described in the *Standard Occupational Classification Manual*.

Total Employment: The number of persons, on a place of residence basis, who, during the reference week which includes the 12th of the month, worked as paid employees; in their own business, profession, or farm; or who worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family. Also included are all persons who were not working but had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, labor-management disputes, or personal reasons, regardless of whether or not they were seeking other jobs. Excluded are persons whose only activity consisted of work around the house (such as own home housework, painting or repairing one's home, etc.) or volunteer work for religious, charitable and similar organizations.

Total Labor Force includes the civilian labor force and members of the Armed Forces stationed either in the United States or abroad, counted by their place of residence.

Unemployed: The number of people who, during the survey week, had no employment but were available for work and:

1. had engaged in any specific jobseeking activity within the past four weeks, such as registering at a public or private employment office, meeting with prospective employers, checking with friends or relatives, placing or answering advertisements, writing letters of application or being on a union or professional register;

2. were waiting to be called back to a job from which they had been laid off; or

3. were waiting to report to a new wage or salary job within 30 days.

Unemployment Rate: The unemployment rate represents the number of unemployed as a percent of the labor force. The seasonally adjusted unemployment rate eliminates the influence of regularly recurring seasonal fluctuations which can be ascribed to weather, crop-growing cycles, holidays, vacations, regular industry model changeover periods, and the like, and , therefore, more clearly shows the underlying basic trend of unemployment.

Weighted Starting Mean Wage is calculated by first multiplying each reported individual wage rate times its corresponding frequency (number of workers), then adding these products to arrive at a sum total. The sum total of all the products is then divided by the total frequency (total number of workers) to determine the weighted starting mean wage. The weighted starting mean wage, therefore, is "weighted" for how many individual workers are employed in that occupation. Weighted range maximums and weighted range minimums are calculated in the same way as the weighted starting mean.

Appendix B: Industrial-Employment Information

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
01	Agricultural Production, Crops	5,387	5,414	27	0.5%
011	Cash Grains	691	452	-239	-34.6%
013	Field Crops, Except Cash Grains	1,029	1,015	-14	-1.4%
016	Vegetables and Melons	1,035	1,102	67	6.5%
017	Fruits and Tree Nuts	649	838	189	29.1%
018	Horticultural Specialties	1,382	1,486	104	7.5%
019	General Farms, Primarily Crop	601	521	-80	-13.3%
02	Agricultural Production, Livestock	1,673	1,997	324	19.4%
021	Livestock, Excluding Dairy, Poultry, Etc.	118	193	75	63.6%
024	Dairy Farms	442	604	162	36.7%
025	Poultry and Eggs	367	384	17	4.6%
027	Animal Specialties	711	753	42	5.9%
029	General Farms, Primarily Livestock	35	63	28	80.0%
07	Agriculture Services	6,247	8,893	2,646	42.4%
071	Soil Preparation Services	21	23	2	9.5%
072	Crop Services	451	537	86	19.1%
074	Veterinary Services	2,009	2,601	592	29.5%
075	Animal Services, Except Veterinary	1,506	1,709	203	13.5%
076	Farm Labor and Management Services	41	136	95	231.7%
078	Landscape and Horticultural Services	2,219	3,887	1,668	75.2%
08	Forestry	*	1,464	0	0.0%
081	Timber Tracts	212	319	107	50.5%
082	Forest Nurseries and Seed Gathering	*	-	0	0.0%
084	Gathering of Miscellaneous Forest Products	*	*	0	0.0%
085	Forestry Services	*	*	0	0.0%
09	Fishing, Hunting and Trapping	39	28	-11	-28.2%
091	Commercial Fishing	25	15	-10	-40.0%
097	Hunting, Trapping, Game Propagation	14	*	0	0.0%
10	Metal Mining	240	37	-203	-84.6%
101	Iron Ores	*	-	0	0.0%
102	Copper Ores	*	*	0	0.0%
103	Lead and Zinc Ores	*	-	0	0.0%
108	Metal Mining Services	12	*	0	0.0%
109	Miscellaneous Metal Ores	-	*	0	0.0%
13	Oil and Gas Extraction	*	*	0	0.0%
138	Oil and Gas Field Services	*	*	0	0.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
14	Nonmetallic Minerals, Except Fuels	1,632	1,874	242	14.8%
141	Dimension Stone	92	199	107	116.3%
142	Crushed and Broken Stone	734	699	-35	-4.8%
144	Sand and Gravel	799	954	155	19.4%
148	Nonmetallic Minerals Services	*	13	0	0.0%
149	Miscellaneous Nonemtallic Minerals	*	*	0	0.0%
15	General Building Contractors	15,491	19,483	3,992	25.8%
152	Residential Building Construction	6,511	8,833	2,322	35.7%
153	Operative Builders	113	126	13	11.5%
154	Nonresidential Building Construction	8,867	10,524	1,657	18.7%
16	Heavy Construction Contractors	7,943	10,542	2,599	32.7%
161	Highway and Street Construction	2,797	5,346	2,549	91.1%
162	Heavy Construction, Except Highway	5,146	5,196	50	1.0%
17	Special Trade Contractors	33,689	44,011	10,322	30.6%
171	Plumbing, Heating, Air Conditioning	10,013	11,849	1,836	18.3%
172	Painting, Paper Hanging, Decorating	1,861	2,586	725	39.0%
173	Electrical Work	5,782	6,960	1,178	20.4%
174	Masonry, Stonework and Plastering	4,461	6,104	1,643	36.8%
175	Carpentering and Flooring	1,816	2,923	1,107	61.0%
176	Roofing and Sheet Metal Work	2,655	3,981	1,326	49.9%1
177	Concrete Work	1,461	2,419	958	65.6%
178	Water Well Drilling	351	336	-15	-4.3%
179	Miscellaneous Special Trade Contractors	5,289	6,853	1,564	29.6%
20	Food and Kindred Products	62,773	62,493	-280	-0.5%
201	Meat Products	12,997	14,249	1,252	9.6%
202	Dairy Products	17,249	17,224	-25	-0.1%
203	Preserved Fruits and Vegetables	10,052	12,208	2,156	21.5%
204	Gain Mill Products	2,342	2,485	143	6.1%
205	Bakery Products	4,462	3,892	-570	-12.8%
206	Sugar and Confectionery Products	1,280	2,156	876	68.4%
207	Fats and Oils	258	155	-103	-39.9%
208	Beverages	11,001	7,624	-3,377	-30.7%
209	Miscellaneous Foods and Kindred Products	3,132	2,500	-632	-20.2%
21	Tobacco Manufacturers	*	-	0	0.0%
212	Cigars	*	-	0	0.0%
213	Chewing and Smoking Tobacco	*	-	0	0.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title			Average Monthly Employment		Change from 1982-1987	
			1982	1987	Numeric	Percent
22		Textile Mill Products	4,035	4,324	289	7.2%
	222	Weaving Mills, Synthetics	*	*	0	0.0%
	224	Narrow Fabric Mills	*	*	0	0.0%
	225	Knitting Mills	3,263	3,762	499	15.3%
	226	Textile Finishing, Except Wool	*	*	0	0.0%
	227	Floor Covering Mills	*	*	0	0.0%
	228	Yarn and Thread Mills	*	*	0	0.0%
	229	Miscellaneous Textile Goods	434	233	-201	-46.3%
23		Apparel and Other Textile Products	6,387	7,088	701	11.0%
	232	Men's and Boys' Furnishings	1,428	2,319	891	62.4%
	233	Women's and Misses' Outerwear	1,627	1,306	-321	-19.7%
	234	Women's and Children's Undergarments	*	*	0	0.0%
	235	Hats, Caps and Millinery	190	*	0	0.0%
	236	Children's Outerwear	*	*	0	0.0%
	237	Fur Goods	*	*	0	0.0%
	238	Miscellaneous Apparel and Accessories	342	351	9	2.6%
	239	Miscellaneous Fabricated Textile Products	2,360	2,485	125	5.3%
24		Lumber and Wood Products	18,288	26,636	8,348	45.7%
	241	Logging Camps and Logging Contractors	1,615	1,730	115	7.1%
	242	Sawmills and Planing Mills	2,650	3,507	857	32.3%
	243	Millwork, Plywood and Structural Members	8,472	13,872	5,400	63.7%
	244	Wood Containers	1,559	1,890	331	21.2%
	245	Wood Buildings and Mobile Homes	1,358	1,864	506	37.3%
	249	Miscellaneous Wood Products	2,634	3,773	1,139	43.2%
25		Furniture and Fixtures	8,866	10,739	1,873	21.1%
	251	Household Furniture	3,922	4,429	507	12.9%
	252	Office Furniture	394	590	196	49.8%
	253	Public Building and Related Furniture	1,644	1,896	252	15.3%
	254	Partitions and Fixtures	1,421	1,751	330	23.2%
	259	Miscellaneous Furniture and Fixtures	1,485	2,073	588	39.6%
26		Paper and Allied Products	46,675	49,263	2,588	5.5%
	261	Pulp Mills	607	*	0	0.0%
	262	Paper Mills, Except Building Paper	28,976	29,449	473	1.6%
	263	Paperboard Mills	1,099	938	-161	-14.7%
	264	Miscellaneous Converted Paper Products	9,098	10,624	1,526	16.8%
	265	Paperboard Containers and Boxes	6,788	7,684	896	13.2%
	266	Building Paper and Board Mills	*	*	0	0.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title			Average Monthly Employment		Change from 1982-1987	
			1982	1987	Numeric	Percent
27		Printing and Publishing	32,512	41,072	8,560	26.3%
	271	Newspapers	10,570	11,855	1,285	12.2%
	272	Periodicals	1,463	1,444	-19	-1.3%
	273	Books	2,983	3,140	157	5.3%
	274	Miscellaneous Publishing	1,400	1,990	590	42.1%
	275	Commercial Printing	13,032	18,512	5,480	42.1%
	276	Manifold Business Forms	1,368	1,842	474	34.7%
	277	Greeting Card Publishing	*	*	0	0.0%
	278	Blankbooks and Bookbinding	659	779	120	18.2%
	279	Printing Trade Services	1,032	1,489	457	44.3%
28		Chemicals and Allied Products	9,238	10,308	1,070	11.6%
	281	Industrial Inorganic Chemicals	393	400	7	1.8%
	282	Plastics Materials and Synthetics	713	774	61	8.6%
	283	Drugs	760	812	52	6.8%
	284	Soap, Cleaners and Toilet Goods	3,604	4,028	424	11.8%
	285	Paints and Allied Products	1,142	1,263	121	10.6%
	286	Industrial Organic Chemicals	398	699	301	75.6%
	287	Agricultural Chemicals	578	525	-53	-9.2%
	289	Miscellaneous Chemical Products	1,650	1,807	157	9.5%
29		Petroleum and Coal Products	380	330	-50	-13.2%
	291	Petroleum Refining	*	*	0	0.0%
	295	Paving and Roofing Materials	113	121	8	7.1%
	299	Miscellaneous Petroleum and Coal Products	123	73	-50	-40.7%
30		Rubber and Plastics Products, NEC*	16,502	25,508	9,006	54.6%
	301	Tires and Inner Tubes	*	*	0	0.0%
	302	Rubber and Plastics Footwear	567	*	0	0.0%
	304	Rubber and Plastics Hose and Belting	*	*	0	0.0%
	306	Fabricated Rubber Products, NEC*	1,765	2,064	299	16.9%
	307	Miscellaneous Plastics Products	12,456	21,174	8,718	70.0%
31		Leather and Leather Products	8,672	6,837	-1,835	-21.2%
	311	Leather Tanning and Finishing	2,547	1,728	-819	-32.2%
	313	Boot and Shoe Cut Stock and Findings	76	88	12	15.8%
	314	Footwear, Except Rubber	4,438	3,402	-1,036	-23.3%
	315	Leather Gloves and Mittens	574	560	-14	-2.4%
	316	Luggage	95	130	35	36.8%
	317	Handbags and Personal Leather Goods	*	845	0	0.0%
	319	Leather Goods, NEC*	100	84	-16	-16.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
32	Stone, Clay and Glass Products	7,939	8,848	909	11.5%
321	Flat Glass	*	50	0	0.0%
322	Glass and Glassware, Pressed or Blown	*	*	0	0.0%
323	Products of Purchased Glass	292	688	396	135.6%
324	Cement, Hydraulic	*	*	0	0.0%
325	Structural Clay Products	*	*	0	0.0%
326	Pottery and Related Products	869	809	-60	-6.9%
327	Concrete, Gypsum and Plaster Products	3,841	3,979	138	3.6%
328	Cut Stone and Stone Products	204	155	-49	-24.0%
329	Miscellaneous Nonmetallic Mineral Products	2,216	2,761	545	24.6%
33	Primary Metal Industries	19,936	18,434	-1,502	-7.5%
331	Blast Furnace and Basic Steel Products	2,473	1,703	-770	-31.1%
332	Iron and Steel Foundries	11,366	9,783	-1,583	-13.9%
334	Secondary Nonferrous Metals	210	124	-86	-41.0%
335	Nonferrous Rolling and Drawing	1,020	856	-164	-16.1%
336	Nonferrous Foundries	4,266	5,459	1,193	28.0%
339	Miscellaneous Primary Metal Products	601	509	-92	-15.3%
34	Fabricated Metal Products	50,900	52,775	1,875	3.7%
341	Metal Cans and Shipping Containers	3,116	1,851	-1,265	-40.6%
342	Cutlery, Hand Tools and Hardware	4,611	4,818	207	4.5%
343	Plumbing and Heating, Except Electric	5,311	6,838	1,527	28.8%
344	Fabricated Structural Metal Products	12,267	12,658	391	3.2%
345	Screw Machine Products, Bolts, Etc.	2,273	2,881	608	26.8%
346	Metal Forgings and Stampings	13,335	10,945	-2,390	-17.9%
347	Metal Services, NEC*	2,346	4,085	1,739	74.1%
348	Ordnance and Accessories, NEC*	972	1,290	318	32.7%
349	Miscellaneous Fabricated Metal Products	6,669	7,409	740	11.1%
35	Machinery, Except Electrical	104,092	103,073	-1,019	-1.0%
351	Engines and Turbines	20,245	20,581	336	1.7%
352	Farm and Garden Machinery	13,741	11,716	-2,025	-14.7%
353	Construction and Related Machinery	14,354	10,713	-3,641	-25.4%
354	Metalworking Machinery	11,298	11,545	247	2.2%
355	Special Industry Machinery	11,274	12,690	1,416	12.6%
356	General Industrial Machinery	15,292	14,315	-977	-6.4%
357	Office and Computing Machines	1,858	3,919	2,061	110.9%
358	Refrigeration and Service Machinery	7,970	6,973	-997	-12.5%
359	Miscellaneous Machinery, Except Electrical	8,060	10,621	2,561	31.8%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
36	Electrical Equipment and Supplies	50,778	46,772	-4,006	-7.9%
361	Electric Distributing Equipment	5,507	6,[illegible]	1,336	24.3%
362	Electrical Industrial Apparatus	19,362	15,[illegible]	-3,784	-19.5%
363	Household Appliances	6,255	5,8[illegible]	-417	-6.7%
364	Electric Lighting and Wiring Equipment	1,348	972	-376	-27.9%
365	Radio and TV Receiving Equipment	598	699	101	16.9%
366	Communication Equipment	3,412	3,312	-100	-2.9%
367	Electronic Components and Accessories	4,149	4,016	-133	-3.2%
369	Miscellaneous Electrical Equipment and Supplies	10,147	9,514	-633	-6.2%
37	Transportation Equipment	29,829	32,847	3,018	10.1%
371	Motor Vehicles and Equipment	22,876	25,425	2,549	11.1%
372	Aircraft and Parts	1,428,*	0	0.0%	
373	Ship and Boat Building and Repairing	3,566	4,821	1,255	35.2%
374	Railroad Equipment	233	435	202	86.7%
375	Motorcycles, Bicycles and Parts	*	1,436	0	0.0%
379	Miscellaneous Transportation Equipment	294	413	119	40.5%
38	Instruments and Related Products	10,622	11,444	822	7.7%
381	Engineering and Scientific Instruments	1,636	3,119	1,483	90.7%
382	Measuring and Controlling Devices	4,056	3,273	-783	-19.3%
383	Optical Instruments and Lenses	*	*	0	0.0%
384	Medical Instruments and Supplies	2,190	2,560	370	16.9%
385	Ophthalmic Goods	386	325	-61	-15.8%
386	Photographic Equipment and Supplies	1,027	995	-32	-3.1%
387	Watches, Clocks and Watchcases	1,325	1,165	-160	-12.1%
39	Miscellaneous Manufacturing Industries	10,120	9,125	-995	-9.8%
391	Jewelry, Silverware and Plated Ware	101	183	82	81.2%
393	Musical Instruments	448	488	40	8.9%
394	Toys and Sporting Goods	2,461	2,139	-322	-13.1%
395	Pens, Pencils, Office and Art Supplies	1,466	632	-834	-56.9%
396	Costume Jewelry and Notions	412	503	91	22.1%
399	Miscellaneous Manufacturers	5,232	5,180	-52	-1.0%
41	Local and Interurban Passenger Transit	10,520	12,308	1,788	17.0%
411	Local and Suburban Transportation	2,916	3,952	1,036	35.5%
412	Taxicabs	735	626	-109	-14.8%
413	Intercity Highway Transportation	479	281	-198	-41.3%
414	Transportation Charter Service	37	634	597	613.5%
415	School Buses	6,302	6,742	440	7.0%
417	Bus Terminal and Service Facilities	51	73	22	43.1%
42	Trucking and Warehousing	27,295	35,233	7,938	29.1%
421	Trucking, Local and Long Distance	25,556	33,708	8,152	31.9%
422	Public Warehousing	1,652	1,456	-196	-11.9%
423	Trucking Terminal Facilities	87	69	-18	-20.7%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
43	U.S. Postal Service	12,176	13,863	1,687	13.9%
431	U.S. Postal Service	12,176	13,863	1,687	13.9%
44	Water Transportation	1,190	960	-230	-19.3%
441	Deep Sea Foreign Transportation	*	-	0	0.0%
443	Great Lakes Transportation	*	*	0	0.0%
444	Transportation on Rivers and Canals	*	*	0	0.0%
445	Local Water Transportation	499	377	-122	-24.5%
446	Water Transportation Services	651	568	-83	-12.8%
45	Transportation by Air	2,121	2,897	776	36.6%
451	Certificated Air Transportation	917	1,765	848	92.5%
452	Noncertificated Air Transportation	555	303	-252	-45.4%
458	Air Transportation Services	649	829	180	27.7%
46	Pipe Line Transportation	*	*	0	0.0%
461	Pipe Lines, Except Natural Gas	*	*	0	0.0%
47	Transportation Services	2,458	3,361	903	36.7%
471	Freight Forwarding	360	362	2	0.6%
472	Arrangement of Transportation	1,908	2,878	970	50.8%
474	Rental of Railroad Cars	21	*	0	0.0%
478	Miscellaneous Transportation Services	169	117	-52	-30.8%
48	Communication	20,373	18,468	-1,905	-9.4%
481	Telephone Communication	14,737	12,458	-2,279	-15.5%
482	Telegraph Communication	66	27	-39	-59.1%
483	Radio and Television Broadcasting	4,101	4,314	213	5.2%
489	Communication Services, NEC*	1,469	1,669	200	13.6%
49	Electric, Gas and Sanitary Services	17,718	20,009	2,291	12.9%
491	Electric Services	7,314	7,374	60	0.8%
492	Gas Production and Distribution	2,938	2,848	-90	-3.1%
493	Combination Utility Services	5,991	6,851	860	14.4%
494	Water Supply	58	609	551	950.0%
495	Sanitary Services	1,417	2,327	910	64.2%
50	Wholesale Trade, Durable Goods	53,800	58,514	4,714	8.8%
501	Motor Vehicles and Automotive Equipment	8,029	8,849	820	10.2%
502	Furniture and Home Furnishings	1,028	1,376	348	33.9%
503	Lumber and Construction Materials	2,266	3,204	938	41.4%
504	Sporting Goods, Toys and Hobby Goods	1,737	1,673	-64	-3.7%
505	Metals and Minerals, Except Petroleum	1,873	1,730	-143	-7.6%
506	Electrical Goods	5,403	6,463	1,060	19.6%
507	Hardware, Plumbing and Heating Equipment	4,021	4,621	600	14.9%
508	Machinery, Equipment and Supplies	26,643	27,086	443	1.7%
509	Miscellaneous Durable Goods	2,800	3,512	712	25.4%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
51	Wholesale Trade, Nondurable Goods	42,836	47,114	4,278	10.0%
511	Paper and Paper Products	2,724	2,997	273	10.0%
512	Drugs, Proprietaries and Sundries	1,530	1,712	182	11.9%
513	Apparel, Piece Goods and Notions	594	855	261	43.9%
514	Groceries and Related Products	15,696	18,787	3,091	19.7%
515	Farm-Product Raw Materials	1,666	1,453	-213	-12.8%
516	Chemicals and Allied Products	2,116	2,503	387	18.3%
517	Petroleum and Petroleum Products	3,724	3,343	-381	-10.2%
518	Beer, Wine and Distilled Beverages	3,628	3,736	108	3.0%
519	Miscellaneous Nondurable Goods	11,158	11,728	570	5.1%
52	Building Materials and Farm Equipment	14,825	18,178	3,353	22.6%
521	Lumber and Other Building Materials	6,441	9,640	3,199	49.7%
523	Paint, Glass and Wallpaper Stores	951	1,038	87	9.2%
525	Hardware Stores	5,789	5,343	-446	-7.7%
526	Retail Nurseries and Garden Stores	1,281	1,824	543	42.4%
527	Mobile Home Dealers	363	333	-30	-8.3%
53	Retail General Merchandise	44,974	48,525	3,551	7.9%
531	Department Stores	37,997	41,203	3,206	8.4%
533	Variety Stores	4,442	4,403	-39	-0.9%
539	Miscellaneous General Merchandise Stores	2,535	2,919	384	15.2%
54	Food Stores	51,364	55,521	4,157	8.1%
541	Grocery Stores	43,806	48,086	4,280	9.8%
542	Meat Markets and Freezer Provisioners	1,147	1,111	-36	-3.1%
543	Fruit Stores and Vegetable Markets	334	381	47	14.1%
544	Candy, Nut and Confectionery Stores	641	924	283	44.2%
545	Dairy Products Stores	724	698	-26	-3.6%
546	Retail Bakeries	4,230	3,914	-316	-7.5%
549	Miscellaneous Food Stores	482	407	-75	-15.6%
55	Automotive Dealers and Service Stations	32,392 41	011	8,619	26.6%
551	New and Used Car Dealers	14,197	18,283	4,086	28.8%
552	Used Car Dealers	811	1,108	297	36.6%
553	Auto and Home Supply Stores	2,324	2,902	578	24.9%
554	Gasoline Service Stations	13,480	16,455	2,975	22.1%
555	Boat Dealers	725	1,187	462	63.7%
556	Recreation and Utility Trailer Dealers	188	365	177	94.2%
557	Motorcycle Dealers	586	657	71	12.1%
559	Automotive Dealers, NEC*	81	54	-27	-33.3%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
56	Apparel and Accessory Stores	14,325	17,010	2,685	18.7%
561	Men's and Boys' Clothing and Furnishings	1,810	1,553	-257	-14.2%
562	Women's Ready-to-Wear Stores	5,387	7,283	1,896	35.2%
563	Women's Accessory and Specialty Stores	319	511	192	60.2%
564	Children's and Infants' Wear Stores	329	456	127	38.6%
565	Family Clothing Stores	2,152	2,323	171	8.0%
566	Shoe Stores	3,682	4,241	559	15.2%
568	Furriers and Fur Shops	104	116	12	11.5%
569	Miscellaneous Apparel and Accessories	542	527	-15	-2.8%
57	Furniture and Home Furnishings Stores	10,785	14,630	3,845	35.7%
571	Furniture and Home Furnishings Stores	5,495	6,567	1,072	19.5%
572	Household Appliance Stores	1,737	1,831	94	5.4%
573	Radio, Television and Music Stores	3,553	6,232	2,679	75.4%
58	Eating and Drinking Places	121,649	142,318	20,669	17.0%
581	Eating and Drinking Places	121,649	142,318	20,669	17.0%
59	Miscellaneous Retail Stores	41,291	51,566	10,275	24.9%
591	Drug Stores and Proprietary Stores	10,485	10,794	309	3.0%
592	Liquor Stores	3,120	2,821	-299	-9.6%
593	Used Merchandise Stores	1,126	1,733	607	53.9%
594	Miscellaneous Shopping Goods Stores	11,331	13,231	1,900	16.8%
596	Nonstore Retailers	7,998	13,416	5,418	67.7%
598	Fuel and Ice Dealers	2,728	3,096	368	13.5%
599	Retail Stores, NEC*	4,503	6,475	1,972	43.8%
60	Banking	26,625	27,668	1,043	3.9%
601	Federal Reserve Banks	*	*	0	0.0%
602	Commercial and Stock Savings Banks	26,353	27,328	975 3.7%	
603	Mutual Savings Banks	56	74	18	32.1%
604	Trust Companies, Nondeposit	*	*	0	0.0%
605	Functions Closely Related to Banking	35	126	91	260.0%
61	Credit Agencies Other Than Banks	12,202	16,426	4,224	34.6%
612	Savings and Loan Associations	5,656	7,241	1,585	28.0%
613	Agricultural Credit Institutions	1,078	1,179	101	9.4%
614	Personal Credit Institutions	4,369	5,300	931	21.3%
615	Business Credit Institutions	332	536	204	61.5%
616	Mortgage Bankers and Brokers	767	2,170	1,403	182.9%
62	Secuirty, Commodity Brokers and Services	2,939	4,461	1,522	51.8%
621	Security Brokers and Dealers	2,554	3,891	1,337	52.4%
622	Commodity Contracts Brokers, Dealers	20	13	-7	-35.0%
623	Security and Commodity Exchanges	3	*	0	0.0%
628	Security and Commodity Services	362	554	192	53.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
63	Insurance Carriers	31,676	35,680	4,004	12.6%
631	Life Insurance	8,996	10,391	1,395	15.5%
632	Medical Service and Health Insurance	5,527	7,319	1,792	32.4%
633	Fire, Marine and Casualty Insurance	15,193	15,319	126	0.8%
635	Surety Insurance	1,061	1,450	389	36.7%
636	Title Insurance	601	807	206	34.3%
637	Pension, Health and Welfare Funds	181	330	149	82.3%
639	Insurance Carriers, NEC*	*	*	0	0.0%
64	Insurance Agents, Brokers and Service	7,544	9,654	2,110	28.0%
641	Insurance Agents, Brokers and Service	7,544	9,654	2,110	28.0%
65	Real Estate	12,562	13,974	1,412	11.2%
651	Real Estate Operators and Lessors	6,625	7,054	429	6.5%
653	Real Estate Agents and Managers	4,352	4,943	591	13.6%
654	Title Abstract Offices	526	920	394	74.9%
655	Subdividers and Developers	1,059	1,057	-2	-0.2%
66	Combined Real Estate, Insurance, Etc.	333	164	-169	-50.8%
661	Combined Real Estate, Insurance, Etc.	333	164	-169	-50.8%
67	Holding and Other Investment Companies	2,018	1,866	-152	-7.5%
671	Holding Offices	996	1,469	473	47.5%
672	Investment Offices	16	*	0	0.0%
673	Trusts	778	227	-551	-70.8%
679	Miscellaneous Investing	228	168	-60	-26.3%
70	Hotels and Other Lodging Places	19,214	21,314	2,100	10.9%
701	Hotels, Motels and Tourist Courts	18,178	19,992	1,814	10.0%
702	Rooming and Boarding Houses	94	149	55	58.5%
703	Camps and Trailering Parks	746	945	199	26.7%
704	Membership-Basis Organization Hotels	196	228	32	16.3%
72	Personal Services	20,249	24,763	4,514	22.3%
721	Laundry, Cleaning and Garment Services	6,235	6,624	389	6.2%
722	Photographic Studios, Portrait	801	1,064	263	32.8%
723	Beauty Shops	8,717	11,562	2,845	32.6%
724	Barber Shops	765	503	-262	-34.3%
725	Shoe Repair and Hat Cleaning Shops	77	71	-6	-7.8%
726	Funeral Service and Crematories	1,324	1,445	121	9.1%
729	Miscellaneous Personal Services	2,330	3,494	1,164	50.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
73	Miscellaneous Business Services	45,031	77,990	32,959	73.2%
731	Advertising	2,945	3,922	977	33.2%
732	Credit Reporting and Collection	931	1,470	539	57.9%
733	Mailing, Reproduction, Stenographic	1,590	2,819	1,229	77.3%
734	Services to Buildings	8,188	12,379	4,191	51.2%
735	News Syndicates	*	39	0	0.0%
736	Personnel Supply Services	7,844	22,339	14,495	184.8%
737	Computer and Data Processing Services	4,998	8,615	3,617	72.4%
739	Miscellaneous Business Services	18,505	26,407	7,902	42.7%
75	Auto Repair, Services and Garages	9,336	12,479	3,143	33.7%
751	Automotive Rentals, Without Drivers	1,554	1,740	186	12.0%
752	Automobile Parking	397	528	131	33.0%
753	Automotive Repair Shops	6,136	7,782	1,646	26.8%
754	Automotive Services, Except Repair	1,249	2,429	1,180	94.5%
76	Miscellaneous Repair Services	3,662	4,199	537	14.7%
762	Electrical Repair Shops	1,194	1,160	-34	-2.9%
763	Watch, Clock and Jewelry Repair	64	93	29	45.3%
764	Reupholstery and Furniture Repair	277	312	35	12.6%
769	Miscellaneous Repair Shops	2,127	2,634	507	23.8%
78	Motion Pictures	2,458	2,050	-408	-16.6%
781	Motion Picture Production and Services	238	225	-13	-5.5%
782	Motion Picture Distribution and Services	28	14	-14	-50.0%
783	Motion Picture Theaters	2,192	1,811	-381	-17.4%
79	Amusement and Recreation Services, NEC*	18,389	20,550	2,161	11.8%
791	Dance halls, Studios and Schools	265	231	-34	-12.8%
792	Producers, Orchestras, Entertainers	833	1,488	655	78.6%
793	Bowling and Billiard Establishments	6,271	5,308	-963	-15.4%
794	Commercial Sports	876	1,058	182	20.8%
799	Miscellaneous Amusement, Recreational Services	10,144	12,465	2,321	22.9%
80	Medical and Other Health Services	165,390	177,959	12,569	7.6%
801	Offices of Physicians	20,947	25,319	4,372	20.9%
802	Offices of Dentists	10,076	11,501	1,425	14.1%
803	Offices of Osteopathic Physicians	239	232	-7	-2.9%
804	Offices of Other Health Practitioners	3,340	5,235	1,895	56.7%
805	Nursing and Personal Care Facilities	34,564	42,188	7,624	22.1%
806	Hospitals	91,782	81,427	-10,355	-11.3%
807	Medical and Dental Laboratories	1,594	2,127	533	33.4%
808	Outpatient Care Facilities	1,195	3,600	2,405	201.3%
809	Health and Allied Services, NEC*	1,653	6,330	4,677	282.9%
81	Legal Services	9,639	11,804	2,165	22.5%
811	Legal Services	9,639	11,804	2,165	22.5%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title		Average Monthly Employment		Change from 1982-1987	
		1982	1987	Numeric	Percent
82	Educational Services	140,567	145,883	5,316	3.8%
821	Elementary and Secondary Schools	91,754	93,862	2,108	2.3%
822	Colleges and Universities	47,643	50,027	2,384	5.0%
823	Libraries and Information Centers	146	735	589	403.4%
824	Correspondence and Vocational Schools	333	334	1	0.3%
829	Schools and Educational Services, NEC*	691	925	234	33.9%
83	Social Services	24,934	30,992	6,058	24.3%
832	Individual and Family Services	2,657	4,246	1,589	59.8%
833	Job Training and Related Services	5,011	5,296	285	5.7%
835	Child Day Care Services	2,860	4,814	1,954	68.3%
836	Residential Care	6,090	7,670	1,580	25.9%
839	Social Services, NEC*	8,316	8,966	650	7.8%
84	Museums, Botanical, Zoological Gardens	609	816	207	34.0%
841	Museums and Art Galleries	603	810	207	34.3%
842	Botanical and Zoological Gardens	*	*	0	0.0%
86	Nonprofit Membership Organizations	15,744	18,028	2,284	14.5%
861	Business Associations	1,446	1,690	244	16.9%
862	Professional Organizations	479	610	131	27.4%
863	Labor Organizations	5,123	5,134	11	0.2%
864	Civic and Social Associations	7,078	9,074	1,996	28.2%
865	Political Organizations	90	43	-47	-52.2%
866	Religious Organizations	294	339	45	15.3%
869	Membership Organizations, NEC*	1,234	1,138	-96	-7.8%
88	Private Households	1,532	2,116	584	38.1%
881	Private Households	1,532	2,116	584	38.1%
89	Miscellaneous Services	13,511	16,973	3,462	25.6%
891	Engineering and Architectural Services	6,149	8,198	2,049	33.3%
892	Noncommercial Research Organizations	1,031	1,143	112	10.9%
893	Accounting, Aduiting and Bookkeeping	6,051	7,333	1,282	21.2%
899	Services, NEC*	280	299	19	6.8%
91	Executive, Legislative and General Government	95,859	81,839	-14,020	-14.6%
911	Executive Offices	114	423	309	271.1%
912	Legislative Bodies	582	660	78	13.4%
913	Executive and Legislative Combined	93,774	78,979	-14,795	-15.8%
919	General Government, NEC*	1,389	1,777	388	27.9%
92	Justice, Public Order and Safety	1,635	8,703	7,068	432.3%
921	Courts	591	822	231	39.1%
922	Public Order and Safety	1,044	7,881	6,837	654.9%
93	Public Finance, Taxation and Monetary	2,550	2,729	179	7.0%
931	Finance, Taxation and Monetary Policy	2,550	2,729	179	7.0%

Statewide Total Covered Employment-Government and Private Industry

Two- and Three-Digit SIC Code and Industry Title			Average Monthly Employment		Change from 1982-1987	
			1982	1987	Numeric	Percent
94		Administration of Human Resources Programs	12,795	8,907	-3,888	-30.4%
	941	Administration of Educational Programs	2,661	2,750	89	3.3%
	943	Administration of Public Health Programs	*	1,168	0	0.0%
	944	Administration of Social and Manpower Programs	9,774	4,661	-5,113	-52.3%
	945	Administration of Veterans' Affairs	*	328	0	0.0%
95		Admin. of Environ. Quality and Housing Programs	4,317	5,206	889	20.6%
	951	Environmental Quality	3,984	4,661	677	17.0%
	953	Housing and Urban Development	333	545	212	63.7%
96		Administration of Economic Programs	5,969	7,056	1,087	18.2%
	961	Admin. of General Economic Programs	162	274	112	69.1%
	962	Regulation, Admin. of Transportation	*	*	0	0.0%
	963	Regulation, Administration of Utilities	221	336	115	52.0%
	964	Regulation of Agricultural Marketing	946	990	44	4.7%
	965	Regulation, Miscellaneous Commercial Sector	468	801	333	71.2%
97		National Security, International Affairs	3,180	3,538	358	11.3%
	971	National Security	3,180	3,538	358	11.3%
99		Nonclassifiable Establishments	-	44	44	-999.9%
	999	Nonclassifiable Establishments	-	44	44	-999.9%

* Data withheld to avoid disclosure of operations of individual employers.
NEC = Not elsewhere classified
Note: Hyphen means no data available

Source: DILHR, Labor Market Information Bureau, Covered Employment and Wage data

Appendix C: Evaluation

TO: Users of the PIETID

FROM: Jerry Snow, Chief of Analysis and Publications Section

SUBJECT: Use of the PIETID

We are often asked to what uses our planning publications are put. We invite you to fill out the sheet below and return it to us.

Department of Industry, Labor and Human Relations
Labor Market Information Bureau
P.O. Box 7944
Madison, Wisconsin 53707

I use this publication for:

Planning

_____employment needs
_____development needs
_____training needs
_____payroll requirements
_____production needs
_____expansion needs
_____research needs
_____curriculum development
_____career development
_____Other _____

What sections of the publication are most useful?

_____Glossary
_____Statistics
_____Graphs
_____Economic Outlook
_____Population
_____Education
_____Occupations
_____Income
_____Industry Trends
_____JTPA
_____Job Service File

I would prefer that there be more _____ in this publication.

Please list suggestions for additional topical areas to include in the next publication.

1. _____

2. _____

3. _____

Appendix D: Publication Order Form

Number of copies

_____ Civilian Labor Force Estimates, State & County Data. (Indicate years: 1975 to date)

_____ Current Population Survey, Annual Average, 1988.

_____ Labor Market Information, A Reference Guide & Directory of Wisconsin Publications, 1988.

_____ Wisconsin Wage Surveys, Catalog of Definitions

LOOK ON NEXT PAGE FOR TITLES WITH VOLUMES FOR THE SERVICE DELIVERY AREAS.

PERIODICALS

Sample Copy	Add to Mailing List	
___	___	Affirmative Action Program Data. Annual.
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___ Wisconsin (state)	___ North Central	___ South Central Wisconsin
___ Central Wisconsin	___ North Lake Winnebago	___ Southwestern Wisconsin
___ Lake Michigan	___ Northeastern Wisconsin	___ Waukesha-Ozaukee-Washington
___ Madison/Dane	___ Northwest Wisconsin	___ West Central Wisconsin
___ Marathon	___ Rock County	___ Western Wisconsin
___ Milwaukee	___ Southeastern Wisconsin	___ Winne-Fond Lake

___ ***Wisconsin Industrial Projections, 2000.***

___ Wisconsin (state)	___ North Central	___ South Central Wisconsin
___ Central Wisconsin	___ North Lake Winnebago	___ Southwestern Wisconsin
___ Lake Michigan	___ Northeastern Wisconsin	___ Waukesha-Ozaukee-Washington
___ Madison/Dane	___ Northwest Wisconsin	___ West Central Wisconsin
___ Marathon	___ Rock County	___ Western Wisconsin
___ Milwaukee	___ Southeastern Wisconsin	___ Winne-Fond Lake

___ ***Wisconsin Occupational Projections, 2000.***

___ Wisconsin (state)	___ North Central	___ South Central Wisconsin
___ Central Wisconsin	___ North Lake Winnebago	___ Southwestern Wisconsin
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___ Madison/Dane	___ Northwest Wisconsin	___ West Central Wisconsin
___ Marathon	___ Rock County	___ Western Wisconsin
___ Milwaukee	___ Southeastern Wisconsin	___ Winne-Fond Lake

___ ***Wage Survey, 1989*** (or most current).

___ Wisconsin (state)	___ North Central	___ South Central Wisconsin
___ Central Wisconsin	___ North Lake Winnebago	___ Southwestern Wisconsin
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___ Madison/Dane	___ Northwest Wisconsin	___ West Central Wisconsin
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